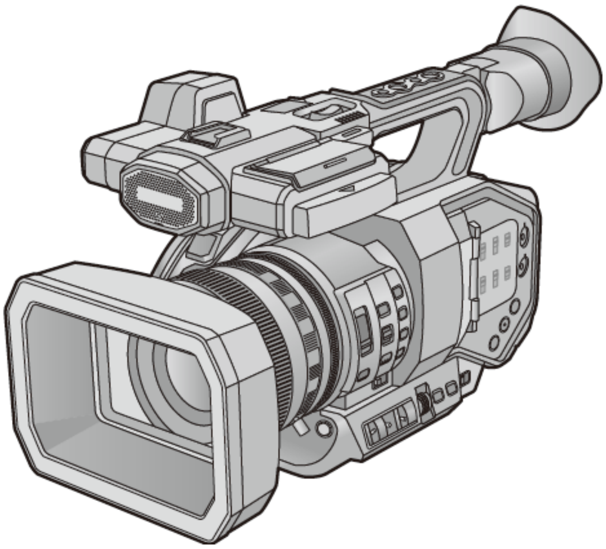
ORDER NO. BSD1509A01CE

Service Manual

- *Sec. 1* *Service Information & Electrical Adjustment*
- *Sec. 2* *Disassembly Procedures*
- *Sec. 3* *Block Diagrams*
- *Sec. 4* *Schematic Diagrams*
- *Sec. 5* *Printed Circuit Board*
- *Sec. 6* *Exploded Views & Replacement Parts List*

Memory Card Camera-Recorder

Model No. **AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC**



AVCHD™ Progressive HDMI SDXC DOLBY DIGITAL

LEICA
DICOMAR

Panasonic®

© Panasonic Corporation 2015
Unauthorized copying and distribution is a violation of law.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Specifications

Memory Card Camera-Recorder

General

Power:
DC 7.2 V (When using battery)
DC 12 V (When using AC adaptor)
Power consumption:
21.7 W (When using LCD monitor)

▭ indicates safety information

Ambient operating temperature:
0 °C to 40 °C (32 °F to 104 °F)

Ambient operating humidity:
10%RH to 80%RH (no condensation)

Mass (Weight):
Approx. 2.7 kg (Approx. 5.95 lbs.)
[body only, excluding lens hood, battery, and accessories]
Approx. 3.1 kg (Approx. 6.80 lbs.)
[including lens hood, supplied battery, and eye cup]

Dimensions (W×H×D):
181 mm×216 mm×374 mm
[7-1/8 "×8-1/2 "×14-23/32 "]
(excluding eye cup and projecting parts)

Camera unit

Pickup device:
4/3-type MOS solid state image sensor

Number of pixels:
FHD (1920×1080): 15.49 million pixels
UHD (3840×2160) 59.94p/50.00p: 8.71 million pixels
UHD (3840×2160) 29.97p/25.00p: 12.89 million pixels
4K (4096×2160) 24P: 13.35 million pixels

Lens:
Optical image stabilizer lens, optical 13× motorized zoom
F value (focal length)
  F2.8 to F4.5 (f=12.8 mm to 167 mm)
  [1/2 " to 6-9/16 "]
35 mm conversion
  FHD (1920×1080);
  28.0 mm to 365.3 mm
  [1-3/32 " to 14-3/8 "]
  UHD (3840×2160) 59.94p/50.00p;
  37.2 mm to 485.1 mm
  [1-15/32 " to 19-3/32 "]
  UHD (3840×2160) 29.97p/25.00p;
  30.6 mm to 398.7 mm
  [1-7/32 " to 15-11/16 "]
  4K (4096×2160) 24p;
  29.5 mm to 384.9 mm
  [1-5/32 " to 15-5/32 "]
  Filter diameter; 72 mm [2-27/32 "]
  ND filter; OFF, 1/4, 1/16, 1/64
  Shortest shooting distance (M.O.D);
  1.0 m (3.3 feet) from the lens
  IR filter; incorporates the ON/OFF control function

Gain setting:
L/M/H selector switch
0 dB to 24 dB (in 1 dB steps, and it is possible to assign the AUTO setting to L/M/H.)
(When assigning [SUPER GAIN] to the USER button: The setting can be switched between 30 dB and 36 dB)

Color temperature setting:
[ATW], [ATW LOCK], [Ach], [Bch],
preset 3200K, preset 5600K, VAR (2000K to 15000K)

Shutter speed:
When [SYSTEM FREQ] = [59.94Hz]
- 60i/60p mode;
  1/60, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/8000 sec.
- 30p mode;
  1/30, 1/50, 1/60, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/8000 sec.
- 24p mode;
  1/24, 1/48, 1/50, 1/60, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/8000 sec.

When [SYSTEM FREQ] = [50.00Hz]
- 50i/50p mode;
  1/50, 1/60, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/8000 sec.
- 25p mode;
  1/25, 1/50, 1/60, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/8000 sec.

Slow shutter speed:
When [SYSTEM FREQ] = [59.94Hz]
- 60i/60p mode;
  1/2, 1/4, 1/8, 1/15, 1/30 sec.
- 30p mode;
  1/2, 1/4, 1/8, 1/15 sec.
- 24p mode;
  1/2, 1/3, 1/6, 1/12 sec.

When [SYSTEM FREQ] = [50.00Hz]
- 50i/50p mode;
  1/2, 1/3, 1/6, 1/12, 1/25 sec.
- 25p mode;
  1/2, 1/3, 1/6, 1/12 sec.

Synchro scan shutter:
When [SYSTEM FREQ] = [59.94Hz]
- 60i/60p mode;
  1/60.0 to 1/249.8 sec.
- 30p mode;
  1/30.0 to 1/249.8 sec.
- 24p mode;
  1/24.0 to 1/249.6 sec.

When [SYSTEM FREQ] = [50.00Hz]
- 50i/50p mode;
  1/50.0 to 1/250.0 sec.
- 25p mode;
  1/25.0 to 1/250.0 sec.

Shutter open angle:
5.0 deg to 180 deg to 360 deg
(in 0.5 deg steps, when angle display is selected)

VFR recording frame rate:
When [SYSTEM FREQ] = [59.94Hz]
- 60p mode;
  2, 15, 30, 40, 55, 58, 60, 62, 65, 75, 90, 120 (fps)
- 30p mode;
  2, 15, 26, 28, 30, 32, 34, 45, 60, 75, 90, 120 (fps)
- 24p mode;
  2, 12, 18, 20, 22, 24, 26, 28, 30, 36, 48, 60, 72, 84, 96, 120 (fps)

When [SYSTEM FREQ] = [50.00Hz]
- 50p mode;
  2, 12, 25, 33, 45, 48, 50, 52, 55, 62, 75, 100, 120 (fps)
- 25p mode;
  2, 12, 21, 23, 25, 27, 30, 37, 50, 62, 75, 100, 120 (fps)

Sensitivity:
When [HIGH SENS. MODE] = [HIGH SENS.]
F11 (2000 lx, 3200 K, 89.9% reflection, 1080/59.94i)
F12 (2000 lx, 3200 K, 89.9% reflection, 1080/50.00i)

Minimum subject illumination:
0.2 lx (F2.8, gain 18 dB, shutter speed 1/2 sec., when [HIGH SENS. MODE] = [HIGH SENS.])

Digital zoom:
2×/5×/10×/i.Zoom (Zoom adjustable from 1.0× to 1.54×)

Lens hood:
Hood with lens cover

Memory card recorder

Recording media:
SDHC Memory Card (4 GB to 32 GB)/
SDXC Memory Card (48 GB to 128 GB);
UHS-I supported

Refer to page 23 for details on SD cards usable in this unit.

Recording slots:
2 slots

System frequency:
59.94Hz, 50.00Hz

Motion picture recording:
Recording method; MOV, MP4, AVCHD
Recording format;

- When [REC MODE] = [MOV], [MP4]
  [4K 2160/24.00p 100M]; Average 100 Mbps (VBR)

(When [SYSTEM FREQ] = [59.94Hz])
  [UHD 2160/59.94p 150M];
  Average 150 Mbps (VBR)
  [UHD 2160/29.97p 100M]/
  [UHD 2160/23.98p 100M];
  Average 100 Mbps (VBR)
  [FHD 1080/59.94p ALL-I 200M]/
  [FHD 1080/29.97p ALL-I 200M]/
  [FHD 1080/23.98p ALL-I 200M];
  Average 200 Mbps (VBR)
  [FHD 1080/59.94p 100M];
  Average 100 Mbps (VBR)
  [FHD 1080/59.94p 50M]/
  [FHD 1080/29.97p 50M]/
  [FHD 1080/23.98p 50M]/
  [FHD 1080/59.94i 50M];
  Average 50 Mbps (VBR)

(When [SYSTEM FREQ] set to [50.00Hz])
  [UHD 2160/50.00p 150M];
  Average 150 Mbps (VBR)
  [UHD 2160/25.00p 100M];
  Average 100 Mbps (VBR)
  [FHD 1080/50.00p ALL-I 200M]/[FHD 1080/25.00p ALL-I 200M]/;
  Average 200 Mbps (VBR)
  [FHD 1080/50.00p 100M];
  Average 100 Mbps (VBR)
  [FHD 1080/50.00p 50M]/[FHD 1080/25.00p 50M]/[FHD 1080/50.00i 50M];
  Average 50 Mbps (VBR)

- When [REC MODE] = [AVCHD]

(When [SYSTEM FREQ] = [59.94Hz])
  [PS 1080/59.94p]; Average 25 Mbps (VBR)
  [PH 1080/59.94i]; Average 21 Mbps (VBR)
  [PH 1080/23.98p]; Average 21 Mbps (VBR)
  [HA 1080/59.94i]; Average 17 Mbps (VBR)
  [HE 1080/59.94i]; Average 5 Mbps (VBR)
  [PM 720/59.94p]; Average 8 Mbps (VBR)
  [SA 480/59.94i]
  (When [ASPECT CONVERT] = [SIDE CROP], [LETTERBOX], [SQUEEZE]);
  Average 9 Mbps (VBR)

(When [SYSTEM FREQ] = [50.00Hz])
  [PS 1080/50.00p]; Average 25 Mbps (VBR)
  [PH 1080/50.00i]; Average 21 Mbps (VBR)
  [HA 1080/50.00i]; Average 17 Mbps (VBR)
  [HE 1080/50.00i]; Average 5 Mbps (VBR)
  [PM 720/50.00p]; Average 8 Mbps (VBR)
  [SA 576/50.00i]
  (When [ASPECT CONVERT] = [SIDE CROP], [LETTERBOX], [SQUEEZE]);
  Average 9 Mbps (VBR)

Refer to "Operating Instructions Vol.2" (PDF file) for the picture size and recordable time of a motion picture.

Still picture recording:
Recording method;
JPEG corresponding DCF (Design rule for Camera File system, based on Exif 2.2 standard)

Refer to "Operating Instructions Vol.2" (PDF file) for picture size of a still picture and number of recordable pictures.

2 Slot function:
Relay, simultaneous, background[*1], dual codec

[*1] Available with a recording format of 50 Mbps or less

Digital video

Video signal for external output:
8bit 4:2:2/10bit 4:2:2
(selectable menu)[*2]

[*2] It is set to 8bit 4:2:0 when UHD 59.94p or UHD 50.00p is selected.

- Recording cannot be performed with this unit when 10bit 4:2:2 is selected.

Recording video signal:
8bit 4:2:0

Video compression format:
MPEG-4 AVC/H.264 High Profile
(MOV/MP4/AVCHD)

Digital audio

Recording audio signal:
48 kHz/16bit 2CH

Audio compression format:
Linear PCM (MOV/MP4), Dolby Digital
(AVCHD)

Headroom:
12 dB

Dual codec

Recording method:
MOV, MP4

Video compression format:
MPEG-4 AVC/H.264 High Profile

Audio compression format:
Linear PCM

Recording format:
When [DUAL CODEC REC] = [FHD 50Mbps]

- For main recording

[REC MODE] = [MOV]/[MP4]
  [UHD 2160/29.97p 100M],
  [UHD 2160/25.00p 100M],
  [UHD 2160/23.98p 100M];
  Average 100 Mbps (VBR)

- For sub recording

[REC MODE] = [MOV]/[MP4][*3]
  FHD 29.97p, 25.00p, 23.98p[*4];
  Average 50 Mbps (VBR)

When [DUAL CODEC REC] = [FHD 8Mbps]

- For main recording

[REC MODE] = [MOV]/[MP4]
  [UHD 2160/29.97p 100M],
  [UHD 2160/25.00p 100M],
  [UHD 2160/23.98p 100M];
  Average 100 Mbps (VBR)
  [FHD 1080/59.94p ALL-I 200M],
  [FHD 1080/50.00p ALL-I 200M],
  [FHD 1080/29.97p ALL-I 200M],
  [FHD 1080/25.00p ALL-I 200M],
  [FHD 1080/23.98p ALL-I 200M];
  Average 200 Mbps (VBR)
  [FHD 1080/59.94p 100M],
  [FHD 1080/50.00p 100M];
  Average 100 Mbps (VBR)

- For sub recording

[REC MODE] = [MOV]
  FHD 59.94p, 50.00p, 29.97p, 25.00p, 23.98p[*4];
  Average 8 Mbps (VBR)

[*3] It records motion picture with the same [REC MODE] setting selected for main recording.

[*4] It records motion picture in the same frame rate as that of the [REC FORMAT] setting selected for main recording.

Video input/output

SDI OUT terminal:
BNC×1,
0.8 V [p-p], 75 Ω, 3G/1.5G HD-SDI, SD-SDI compatible
Output format;
1080/59.94p LEVEL-A/50.00p LEVEL-A, 1080/29.97PsF/25.00PsF/24.00PsF/23.98PsF, 1080/59.94i/50.00i, 720/59.94p/50.00p, 480/59.94i, 576/50.00i

VIDEO OUT terminal:
BNC×1,
Composite; 1.0 V [p-p], 75 Ω

HDMI OUT terminal:
HDMI×1,
(HDMI Type A, not compatible with VIERA Link)
Output format;
2160/59.94p/50.00p/29.97p/25.00p/24.00p/23.98p, 1080/59.94p/50.00p/29.97p/25.00p/24.00p/23.98p/59.94i/50.00i, 720/59.94p/50.00p, 480/59.94p, 576/50.00p

Audio input

Built-in microphone:
Supports stereo microphone

AUDIO INPUT1/AUDIO INPUT2 terminal:
XLR×2, 3-pin
Input high impedance, LINE/MIC/MIC+48 V (switch selection)

- LINE; +4 dBu/0 dBu (selectable menu)
- MIC; −40 dBu /−50 dBu /−60 dBu (selectable menu)

Audio output

SDI OUT terminal:
2ch (Linear PCM)
Gain settings; 0 dB/−6 dB/−12 dB (selectable menu)

HDMI OUT terminal:
2ch (Linear PCM)

AUDIO OUT terminal:
3.5 mm (0.14 ") diameter stereo mini jack×1
Output level; 600 Ω, 316 mV

Headphone output terminal:
3.5 mm (0.14 ") diameter stereo mini jack×1

Speaker:
Round type speaker with a diameter of 20 mm (0.79 ") ×1

Other input/output

CAM REMOTE terminal:
2.5 mm (0.1 ") diameter super mini jack×1 (ZOOM, S/S)
3.5 mm (0.14 ") diameter mini jack×1 (FOCUS, IRIS)

TC PRESET IN/OUT terminal:
BNC×1,
Used as the input and output terminals

- Input; 1.0 V to 4.0 V [p-p], 10 kΩ
- Output; 2.0 V ±0.5 V [p-p], low impedance

USB HOST terminal:
Type A connector, 9-pin, bus power supported
In Recording mode;
USB2.0 compatible (5 V, 0.5 A)
In Playback mode;
USB 3.0 compatible (5 V, 0.9 A), used for external media device connection*5

*5 External media device with a capacity of 32 GB or below or a capacity above 2 TB cannot be used

USB DEVICE terminal:
Type Micro B connector, 10-pin, USB 3.0 compatible, used for the mass storage function (read only)

DC input terminal:
DC 12 V (DC 11.4 V to 12.6 V), EIAJ type 4

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts, which have been over-heated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5MΩ.

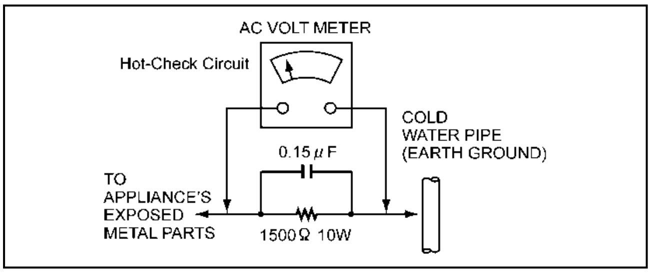


Figure1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a 1.5KΩ, 10W resistor, in parallel with a 0.15μ F capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ABOUT LEAD FREE SOLDER (PbF)

Distinction of Pbf PCB:

PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

Caution:

1. Pb free solder has a higher melting point than standard solder; Typically the melting point is 50–70°F (30-40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700±20°F (370±10°C).
2. Pb free solder will tend to splash when heated too high (about 1100°F/600°C).

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ED) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as “anti-static” can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.
   (most replacement ES devices are package with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

Note: It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV, ±0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

Information for Your Safety

WARNING:

To reduce the risk of fire, electric shock or product damage,

- Do not expose this unit to rain, moisture, dripping or splashing.
- Do not place objects filled with liquids, such as vases, on this unit.
- Use only the recommended accessories.
- Do not remove covers.
- Do not repair this unit by yourself. Refer servicing to qualified service personnel.

CAUTION!

To reduce the risk of fire, electric shock or product damage,

- Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure this unit is well ventilated.
- Do not obstruct this unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.
- Do not place sources of naked flames, such as lighted candles, on this unit.

IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Battery pack (Lithium ion battery pack)

- Use the specified unit to recharge the battery pack.
- Do not use the battery pack with equipment other than the specified unit.
- Do not get dirt, sand, liquids, or other foreign matter on the terminals.
- Do not touch the plug terminals (+ and −) with metal objects.
- Do not disassemble, remodel, heat or throw into fire.

If any electrolyte should come into contact with your hands or clothes, wash it off thoroughly with water.

If any electrolyte should come into contact with your eyes, never rub the eyes. Rinse eyes thoroughly with water, and then consult a doctor.

Warning

Risk of fire, explosion and burns. Do not disassemble, heat above 60 °C (140 °F) or incinerate.

CAUTION

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
- When disposing of the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.

U.S.A./CANADA CONSUMERS: ATTENTION:

A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

■ Indemnity about recorded content

Panasonic does not accept any responsibility for damages directly or indirectly due to any type of problems that result in loss of recording or edited content, and does not guarantee any content if recording or editing does not work properly. Likewise, the above also applies in a case where any type of repair is made to the unit.

■ About Condensation (When the lens, the viewfinder or LCD Monitor is fogged up)

Condensation occurs when there is a change in temperature or humidity, such as when the unit is taken from outside or a cold room to a warm room. Please be careful, as it may cause the lens, the viewfinder or LCD monitor to become soiled, moldy, or damaged.
When taking the unit to a place which has a different temperature, if the unit is accustomed to the room temperature of the destination for about one hour, condensation can be prevented. (When the difference in temperature is severe, place the unit in a plastic bag or the like, remove air from the bag, and seal the bag.)
When condensation has occurred, remove the battery and/or the AC adapter and leave the unit like that for about one hour. When the unit becomes accustomed to the surrounding temperature, fogginess will disappear naturally.

■ About security

Be careful about the possibility of theft or loss of the unit, and be careful not to leave the unit unattended. Please note that Panasonic does not accept any responsibility for the compromise, manipulation, and loss of information caused by these events.

■ Caution regarding laser beams

The lens may suffer damage if struck by a laser beam. Make sure that laser beams do not strike the lens when shooting in an environment where laser devices are used.

Panasonic®

SECTION 1

SERVICE INFORMATION & ELECTRICAL ADJUSTMENT

Model No. : AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC

NOTE: Electrical adjustment procedure is also described in this section.
(Item 3-5-1 to 3-5-18)

CONTENTS

1. Service Fixture & Tools INF-1
  1-1. List of Service Fixture and Tools INF-1
  1-2. List of Recommended Measuring and Instruments INF-2
2. Replacement procedure of Lithium Battery INF-3
3. Service Mode INF-4
  3-1. Factory Setting INF-6
  3-2. Model / Destination Setting INF-7
  3-3. Hour Meter & Error code indication INF-8
  3-4. Power ON Self Check Result Display INF-11
  3-5. Service Adjustment Function INF-12
    3-5-1. Setting of destination INF-15
    3-5-2. Setting of Backup file name INF-16
    3-5-3. Adjustment Data Backup INF-17
    3-5-4. Check of button and SW INF-18
    3-5-5. Zoom Lever adjustment t INF-19
    3-5-6. CAMERA adjustment INF-21
    3-5-7. Zoom Tracking adjustment INF-22
    3-5-8. Finite Focus adjustment INF-23
    3-5-9. IRIS Diameter adjustment INF-25
    3-5-10. Sensitivity adjustment INF-27
    3-5-11. White balance (3100K) adjustment INF-29
    3-5-12. White blance (5600K) adjustment INF-30
    3-5-13. White Shading adjustment INF-31
    3-5-14. Blemish Compensation adjustment INF-32
    3-5-15. Balance Shot adjustment INF-34
    3-5-16. Internal Clock 27MHz adjustment INF-36
    3-5-17. Video Y/C level adjustment INF-37
    3-5-18. Eye Sensor adjustmentt INF-39
  3-6. Restore the adjustment data INF-40
  3-7. Touch Panel adjustment function INF-42
  3-8. Hour Meter Reset INF-43

4. Firmware update procedure INF-45
  4-1. Version display method INF-45
  4-2. Update with the SD memory card INF-45
    4-2-1. Copy the firmware update file into an SD memory card INF-45
    4-2-2. Updated procedure INF-46
5. Operation after major part exchanged INF-50
  5-1. Operation List INF-50
  5-2. Operation flow chart after replacement of major parts INF-51
    5-2-1. MAIN P.C.Board INF-51
    5-2-2. LENS Unit INF-53
    5-2-3. SS GYRO P.C.Board INF-53
    5-2-4. GRIP ZOOM P.C.Board INF-54
    5-2-5. EVF Unit INF-54
    5-2-6. LCD Unit INF-54
    5-2-7. HANDLE OP P.C.Board INF-55
    5-2-8. SUB SS ZOOM P.C.Board INF-55
    5-2-9. OP AUDIO P.C.Board INF-55
    5-2-10. OP TOGGLE P.C.B / OP MENU P.C.B / OP USER P.C.B / OP CAM P.C.B INF-55
  5-3. Adjustment after replacement of major parts INF-56
6. P.C.Board Location INF-57

Appendix. Cross chart/ Siemens Star Chart

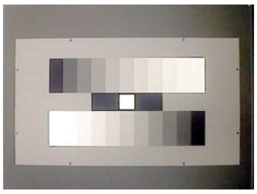
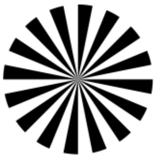
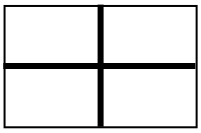
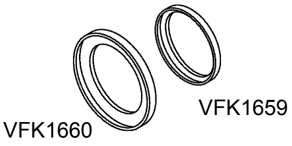
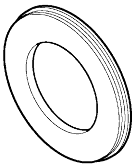
1. Service Fixture & Tools

1-1. List of Service Fixture and Tools

No.	Parts No.	Name	Remarks
1	VFK1642	Gray Scale Chart (Reflection type)	16:9
2	---------	White chart	
3	----------	Siemens Star Chart	Print out the chart described on the last page of Service Information..
4	----------	Cross Line Chart	Print out the chart described on the last page of Service Information..
5	VFK1347	CC Filter (LB120)	
6	VFK1884	CC Filter (LBA2)	
7	VFK1888	CC Filter (LBB6)	
8	VFK1345	CC Filter Holder	
9	VFK1346	Step-Down Ring (62mm-52mm)	
10	VFK1659	Step-Up Ring (43mm-49mm)	
11	VFK1660	Step-Up Ring (49mm-62mm)	
12	VFK1809	72mm Attachment Ring	
13	RFKZ0422	Collimator	***NOTE1: Please refer to the following.**
14	----------	Collimator Adaptor	***NOTE2: Please refer to the following.**

***NOTE1:**
Same collimator as AG-HMC150/HPX170 series. Please consult service department of Professional AV Business unit about purchase. It is the same as the service tool used by serving the Digital Still Camera.

***NOTE2:**
Same collimator as AG-HMC150/HPX170 series. Please consult service department of Professional AV Business unit about purchase.

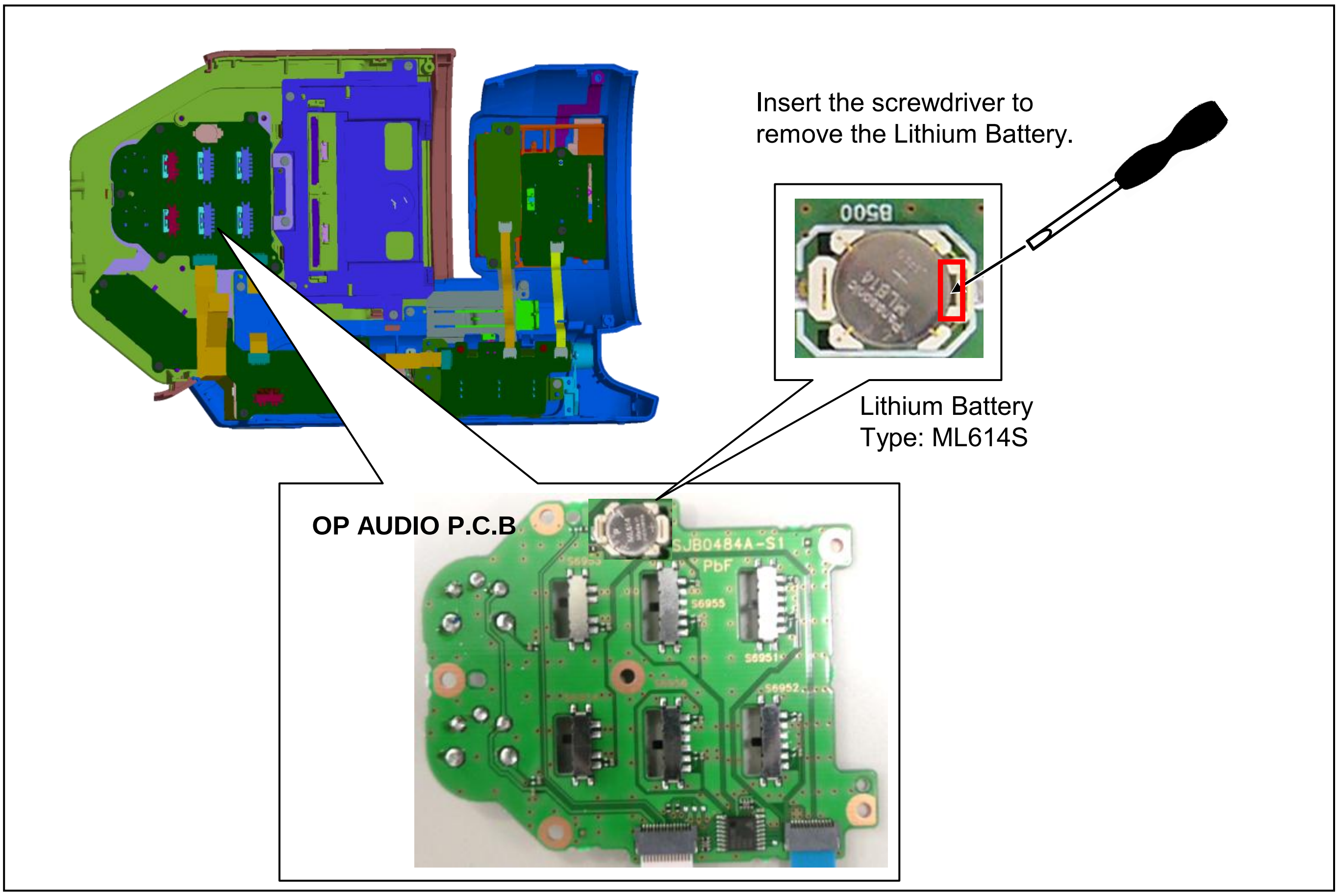
1 **VFK1642** Gray-scale Chart (16:9, Reflection Type) 	**2** **-----** White Chart 	**3** **-----** Siemens Star Chart 	**4** **-----** Cross Line Chart 
5 **VFK1347** (LB120) **6** **VFK1884** (LBA2) **7** **VFK1888** (LBB6) CC Filter 	**8** **VFK1345** CC Filter Holder **9** **VFK1346** Step Down Ring (62mm - 52mm) 	**10** **VFK1659** Step-up Ring (43mm - 49mm) **11** **VFK1660** Step-up Ring (49mm - 62mm) 	**12** **VFK1809** 72 mm Attachment Ring 
13 **RFKZ0422** Collimator 	**14** **-----** Collimator Adaptor 		

1-2. List of Recommended Measuring and Instruments

NAME	REMARKS
HD Monitor TV	with SDI input
Monitor TV	
HD/SD Waveform Monitor	• with SDI INPUT • R,G,B/Y,Pb,Pr Display Switching
Vector Scope	
Halogen Lamp	500W 3200K
Lux Meter	
Color Pyrometer	
Level Gauge	

2. Replacement procedure of Lithium Battery

1. Remove the SIDE CASE R U “SYK1081”.
2. There is a Lithium battery on the OP AUDIO P.C.B “SEP0484AA” (Ref No: B6951 at foil side of OP AUDIO P.C.B.).
3. Insert the screwdriver to groove of the Lithium Battery Holder and press it down to remove the Lithium Battery. (Pay attention to removal of battery to be pop-up)
4. Install the new battery.
5. Set the date and time of internal clock (Refer to item **“Setting the date/time of the internal clock”** of operation instructions for the setting method).



Insert the screwdriver to remove the Lithium Battery.

Lithium Battery
Type: ML614S

OP AUDIO P.C.B

NOTE:
The lithium battery is a critical component.
It must never be subjected to excessive heat of discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

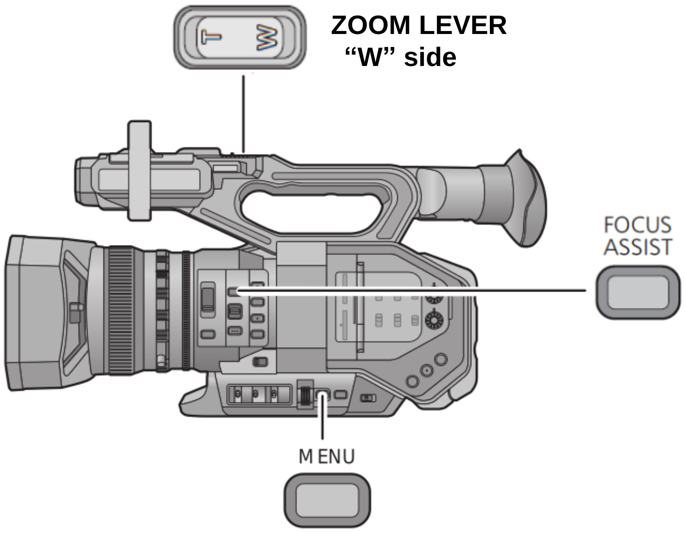
ATTENTION: DANGER D'EXPLOSION SI LA PILE N'EST PAS REMPLACÉE CORRECTEMENT.
NE REMPLACER QUE PAR LE MÊME TYPE OU UN TYPE ÉQUIVALENT.

CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.
REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE.

3. Service Mode

< How to open the SERVICE menu >

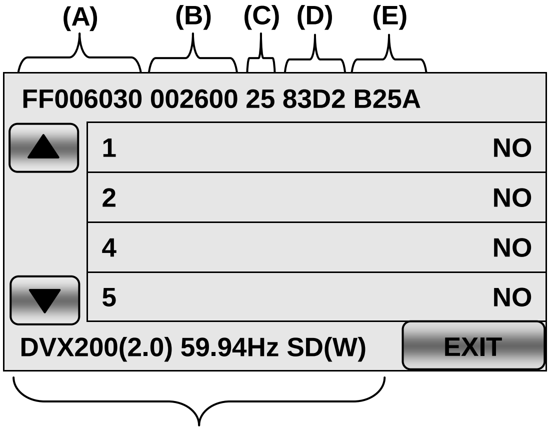
1. Keep pressing **“MENU”** button, **“FOCUS ASSIST”** button, and **“ZOOM LEVER”** to **“W”** side for more than 3 seconds until the top screen of Service Mode Menu being displayed.



< Top screen of the service mode menu >

Display of Software version

(A): MAIN Micon software version
(B): CAM Micon software version
(C): MAIN EEPROM version
(D): CRC for MAIN EEPROM
(E): CRC for CAM EEPROM



FF006030 002600 25 83D2 B25A

1	NO
2	NO
4	NO
5	NO

DVX200(2.0) 59.94Hz SD(W)

Display of Product information

DVX200:	**Model No. / Destination**
(2.0):	**Level of product (*fixed value)**
59.94Hz:	**Image information (NTSC or PAL)**
SD(W):	**Media information (SD card) (*fixed value)**

< Service mode menu >

Number	Contents	Function
1	Factory settings	Function to set a product to a factory shipment state.
2	Select Model / Destination	Function to set Model Destination
4	Hour Meter & Error code indication	＜Hour Meter＞ Function to display the Hour Meter information. ＜CAM Info＞ The last 3 error codes saved in CAM EEPROM is displayed.
5	Self-check result display	Function to diagnose if the devices and the interfaces between devices are working correctly.
7	Factory use only	Factory use only
8	Factory use only	Factory use only
10	Hour Meter Reset	Function to reset Hour Meter and Error information.
13	Not Used	No function
14	Service adjustment function	Camera adjustments can be made on the unit alone.
15	Adjustment data restoration	Function to write the backup adjustment data file back to the camera.
16	Touch panel adjustment	Function to adjust the touch panel
17	Not Used	No function

NOTE: Please do not touch the numbers that have the description of “Not Used” and “Factory use only”.

3-1. Factory Setting

Please note that the following data etc. are initialized when the Factory setting is executed.

- Menu setting value
- Clear Date & Time information

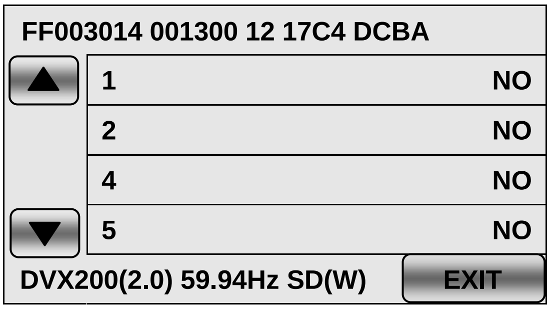
NOTE: Camera adjustment values, hour meter, serial number, and destination are not reset.

Touch “1” on the service mode menu screen.
YES/NO selection screen is displayed, then touch “YES” to execute the factory setting.

After the factory setting process is completed, the shutter sound effect is made. (Even if the menu item “ALERT SOUND” is “OFF”, it is made and “END” is displayed on the screen.)

If the factory setting process is not successful, the screen changes as follows (whole LCD screen lights up) to show the failure.
Yellow → light blue → green → purple → red → blue → black (It repeats in a loop in this order.)

＜How to end the factory setting＞
After the “END” screen is displayed, set the POWER SW to OFF to exit the factory setting screen (service mode).

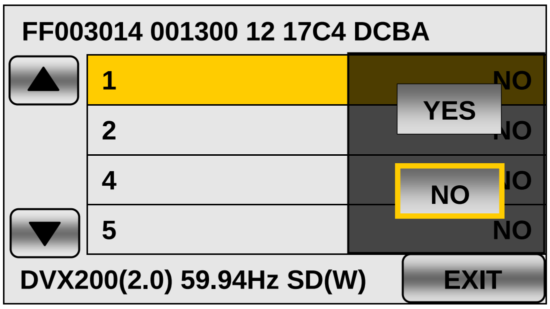


FF003014 001300 12 17C4 DCBA

1 NO
2 NO
4 NO
5 NO

DVX200(2.0) 59.94Hz SD(W)

Top Screen of the service mode menu.



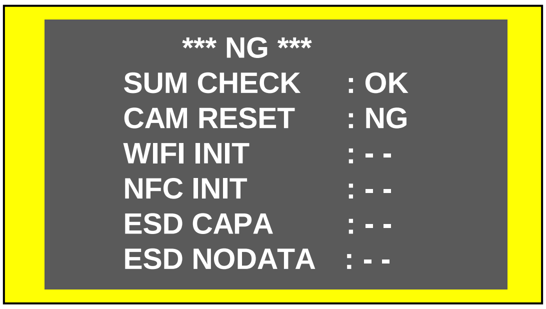
FF003014 001300 12 17C4 DCBA

1 NO
2 NO
4 NO
5 NO

DVX200(2.0) 59.94Hz SD(W)

Touch [YES]

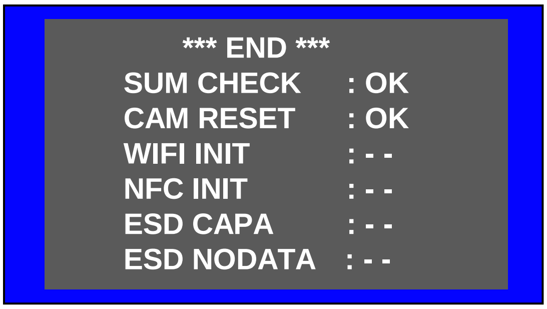
<*If the factory setting process is not successful>



*** NG ***
SUM CHECK : OK
CAM RESET : NG
WIFI INIT : - -
NFC INIT : - -
ESD CAPA : - -
ESD NODATA : - -

Yellow → light blue → green → purple → red → blue → black
(This pattern repeats itself.)

< Completion screen >



*** END ***
SUM CHECK : OK
CAM RESET : OK
WIFI INIT : - -
NFC INIT : - -
ESD CAPA : - -
ESD NODATA : - -

Turn off the power by POWER SW.

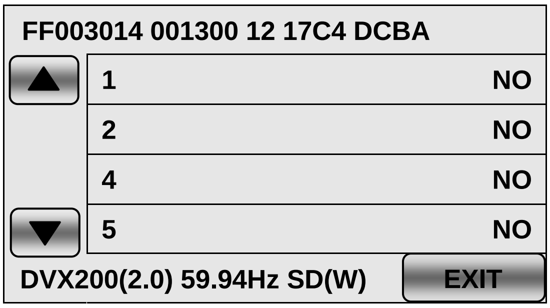
3-2. Model / Destination Setting

Touch “2” on the service mode menu screen.
YES/NO selection screen is displayed, then touch “YES”. Model & Destination setting screen opens.

Select Model name by touching V or ∧, and then touch SET. Model and Destination setting is executed.

After the setting completion, turn off the power by removing AC adaptor or the adaptor cable.
Note: The power can’t be turned off by Power SW.

Touch the [2] of LCD.

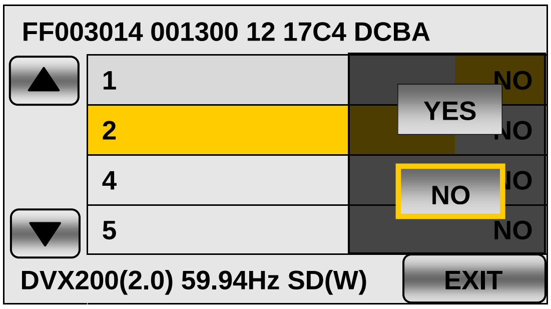


FF003014 001300 12 17C4 DCBA

1 NO
2 NO
4 NO
5 NO

DVX200(2.0) 59.94Hz SD(W)

Top Screen of the service mode menu.

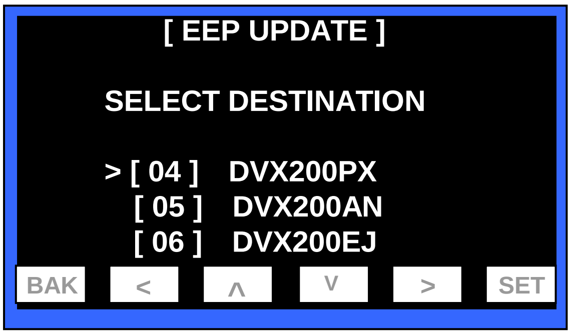


FF003014 001300 12 17C4 DCBA

1 NO
2 NO
4 NO
5 NO

DVX200(2.0) 59.94Hz SD(W)

Touch the [YES] of LCD.



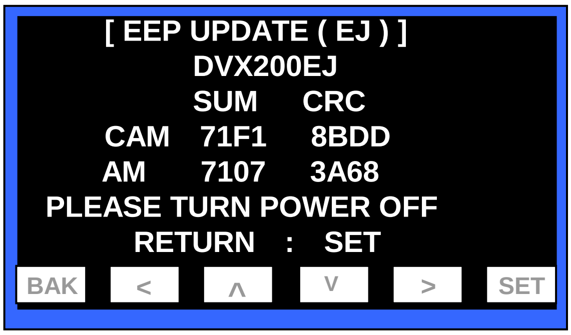
[EEP UPDATE]

SELECT DESTINATION

> [04] DVX200PX
[05] DVX200AN
[06] DVX200EJ

Select Model name by touching V or ∧, and then touch SET.

[SET]



[EEP UPDATE (EJ)]
DVX200EJ
SUM CRC
CAM 71F1 8BDD
AM 7107 3A68
PLEASE TURN POWER OFF
RETURN : SET

Completion screen

When touching [SET], exit service mode and return to normal CAM mode.

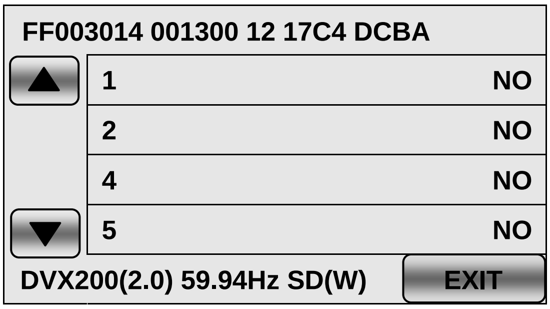
3-3. Hour Meter & Error code indication

On the screen in the service mode “4”, the following information is displayed.

- Operating time: Total operation time in a power-on state / total recording mode time
- Recording time: Function to display the movie recording time / interval recording time
- Error code display (CAM):
  Error code of the last 3 errors saved in CAM EEPROM is displayed.

Touch “4” on the service mode menu screen.
YES/NO selection screen is displayed, then touch “YES” to display the INFORMATION screen.

Touch the [4] of LCD.

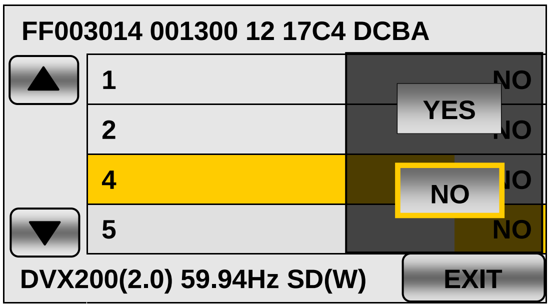


FF003014 001300 12 17C4 DCBA

1 NO
2 NO
4 NO
5 NO

DVX200(2.0) 59.94Hz SD(W)

Top Screen of the service mode menu.

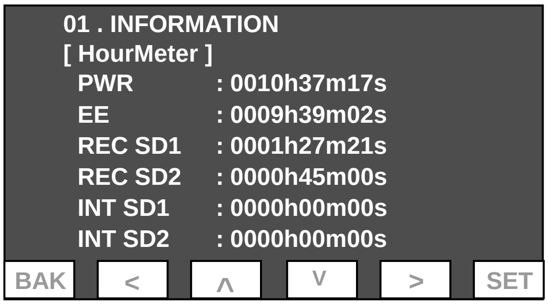


FF003014 001300 12 17C4 DCBA

1 NO
2 NO
4 NO
5 NO

DVX200(2.0) 59.94Hz SD(W)

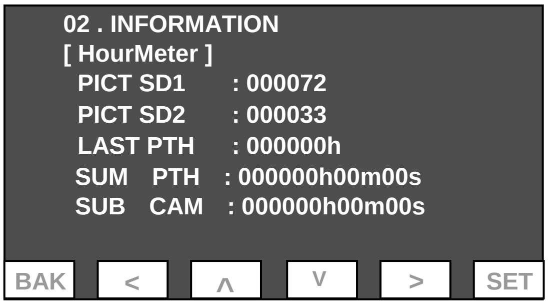
Touch the [YES] of LCD.



01 . INFORMATION
[HourMeter]
PWR : 0010h37m17s
EE : 0009h39m02s
REC SD1 : 0001h27m21s
REC SD2 : 0000h45m00s
INT SD1 : 0000h00m00s
INT SD2 : 0000h00m00s

PWR : Total power-on time
EE : Total EE-state (Recording mode) time
REC SD1 : Total movie recording time (SD Slot1)
REC SD2 : Total movie recording time (SD Slot2)
INT SD1 : Total interval recording time (SD Slot1)
INT SD2 : Total interval recording time (SD Slot2)

Touch the [>] of LCD.

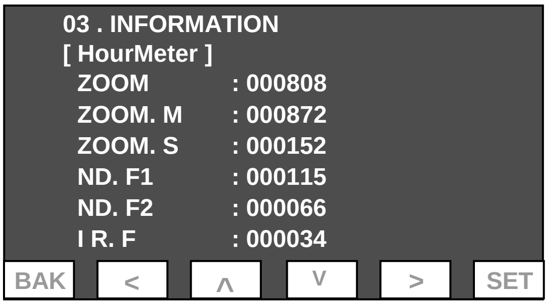


02 . INFORMATION
[HourMeter]
PICT SD1 : 000072
PICT SD2 : 000033
LAST PTH : 000000h
SUM PTH : 000000h00m00s
SUB CAM : 000000h00m00s

PICT SD1 : Total number of recorded still pictures (SD Slot1)
PICT SD2 : Total number of recorded still pictures (SD Slot2)
LAST PTH : Not used
SUM PTH : Not used
SUB CAM : Not used

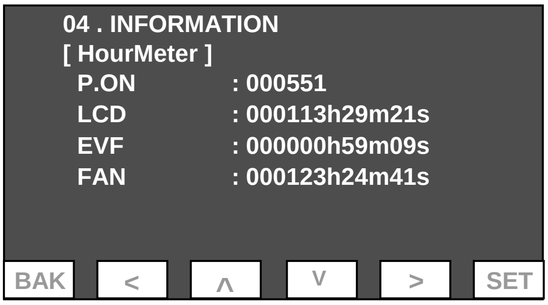
Touch the [>] of LCD.

ZOOM : Total number of ZOOM Motor operation
ZOOM. M : The total number of times of Grip Zoom lever operation
ZOOM. S : The total number of times of Sub Zoom lever operation
ND. F1 : The number of times of ND filter(1/4) select
ND. F2 : The number of times of ND filter(1/16) select
IR. F : The number of times of IR filter select


03 . INFORMATION
[HourMeter]
ZOOM : 000808
ZOOM. M : 000872
ZOOM. S : 000152
ND. F1 : 000115
ND. F2 : 000066
I R. F : 000034

Touch the [>] of LCD.

P.ON : The number of times of Power SW operation
LCD : Operation time of LCD
EVF : Operation time of EVF
FAN : Operation time of FAN


04 . INFORMATION
[HourMeter]
P.ON : 000551
LCD : 000113h29m21s
EVF : 000000h59m09s
FAN : 000123h24m41s

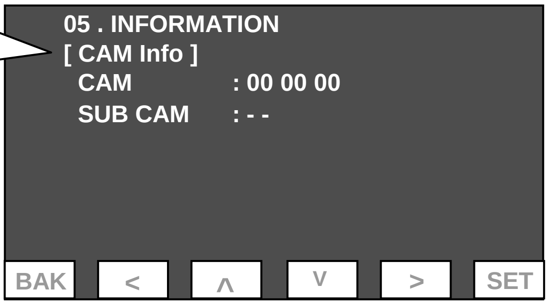
Touch the [>] of LCD.

< Display of CAM Error code >

CAM : $\underbrace{00}_{A}\ \underbrace{00}_{B}\ \underbrace{00}_{C}$

A: the third to last error
B: the second to last error
C: the last error

SUB CAM : Not used


05 . INFORMATION
[CAM Info]
CAM : 00 00 00
SUB CAM : - -

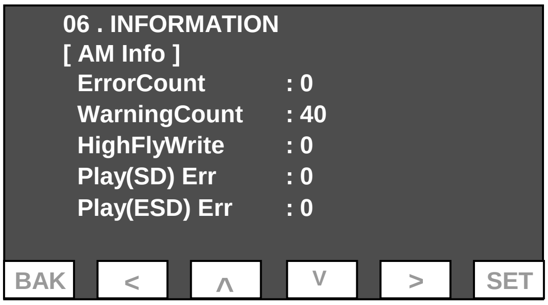
Touch the [>] of LCD.

< Details about Camera Error Code >

Function to display the last 3 camera error codes in the error history saved in EEPROM.
The error codes represent as follows.

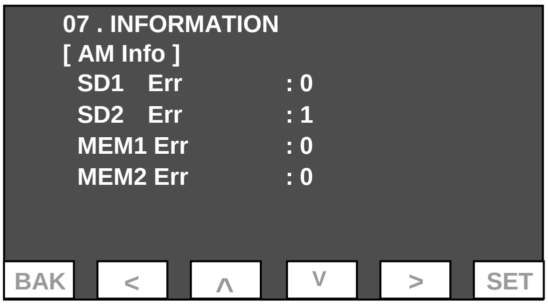
ERROR CODE	Contents of Error
51	Focus lens control is abnormal
53	OIS lens control is abnormal
00	No error

Touch the [>] of LCD.


06 . INFORMATION
[AM Info]
ErrorCount : 0
WarningCount : 40
HighFlyWrite : 0
Play(SD) Err : 0
Play(ESD) Err : 0

ErrorCount : Total Error count
WarningCount : Total Warning count
HighFlyWrite : Not used
Play(SD) Err : Play SD Card error count
Play(ESD) Err : Not used

Touch the [>] of LCD.


07 . INFORMATION
[AM Info]
SD1 Err : 0
SD2 Err : 1
MEM1 Err : 0
MEM2 Err : 0

SD1 Err : SD Card Slot1 error count
SD2 Err : SD Card Slot2 error count
MEM1 Err : Not used
MEM2 Err : Not used

< How to exit the display screen >
On the service mode menu screen, touch “BAK” to exit the service mode and return to the normal screen.

3-4. Power ON Self Check Result Display

< Indication contents >

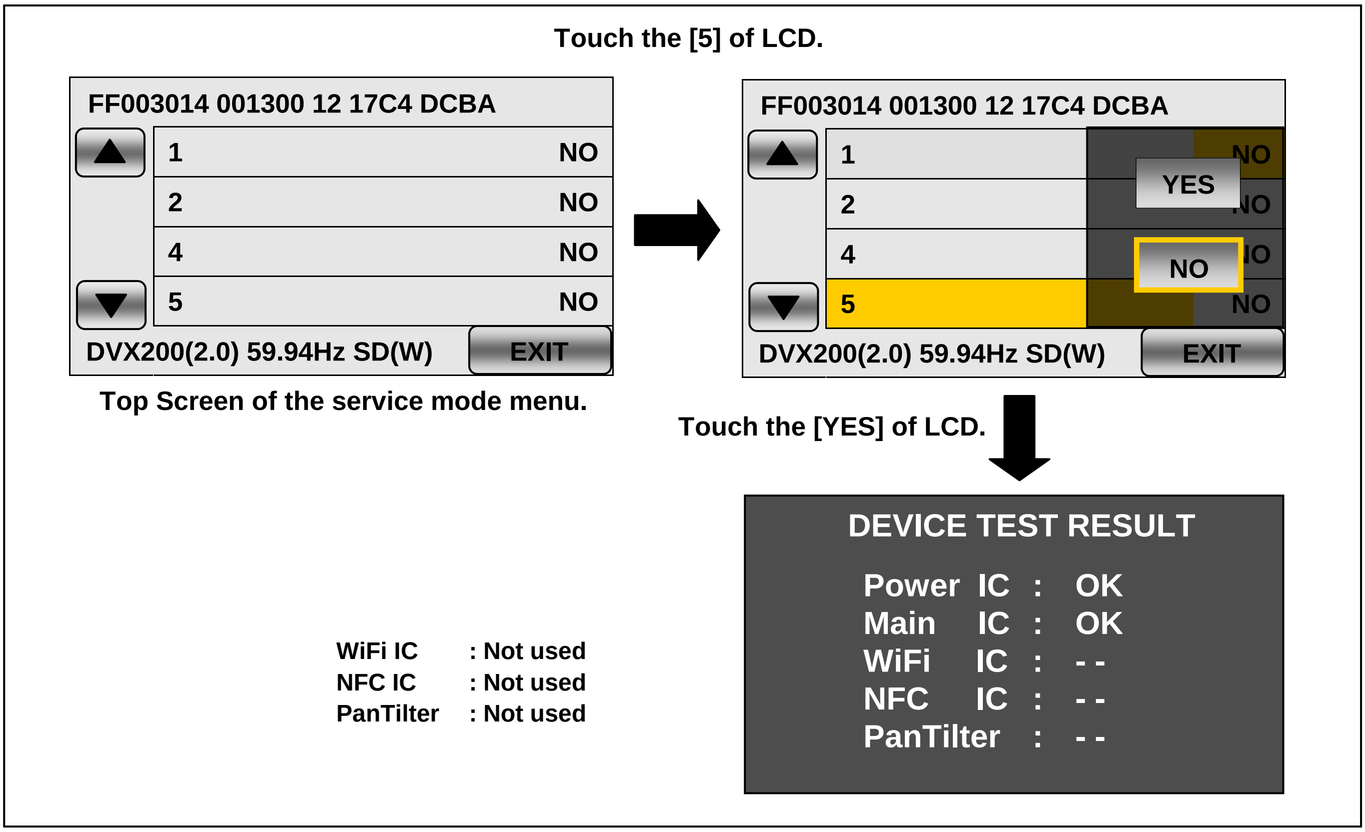
Self-check is executed at the power-on. Power ON self-check result display.
Function to diagnose correct function of the device and interface between devices result display.

Display the following communication test result.

- Power IC : Communication test between Main IC "IC3401" and Power Control IC "IC2303" on Main PCB.
- Main IC : Main IC "IC3401" internal communication test. The result of communication test between BE MICON and CAM MICON (both MICONs inside Main IC(IC3401)), and between BE MICON and DDR memory(IC3402).

< How to diagnose the self-check result display >

Touch "5" on the service mode menu screen.
YES/NO selection screen is displayed, then touch "YES" to execute the device test and display the DEVICE TEST RESULT screen.



Touch the [5] of LCD.

Top Screen of the service mode menu.

Touch the [YES] of LCD.

```
DEVICE TEST RESULT

Power  IC  :  OK
Main   IC  :  OK
WiFi   IC  :  - -
NFC    IC  :  - -
PanTilter  :  - -
```

WiFi IC : Not used
NFC IC : Not used
PanTilter : Not used

< How to exit the display screen >
On the service mode menu screen, touch "BAK" to exit the service mode and return to the normal screen.

3-5. Service Adjustment Function

Instead of using EVR software (via PC connection), adjustments can be made on the camera recorder alone (a subject needed).
Depends on the adjustment item, recording mode will be changed automatically and SDI output won't be available.
So please set the "OUTPUT SEL" menu to "SDI+AV" before starting service adjustment and use Video output when SDI output is not available.

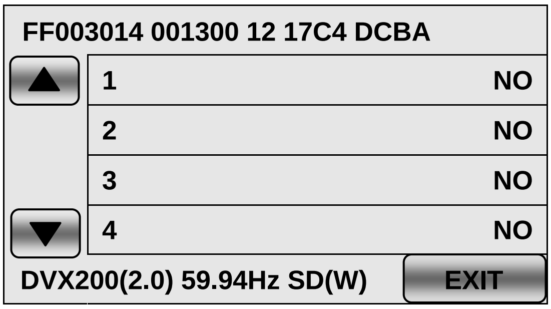
Touch "14" on the service mode menu screen.
YES/NO selection screen is displayed, then touch "YES" to display the SERVICE ADJUSTMENT screen.

Functions on the SERVICE ADJUSTMENT screen are as follows.

1 : Setting of destination
2 : Setting Backup file name
3 : Adjustment Data Backup
4 : Check of button and SW
5 : Zoom lever adjustment
6 : Camera adjustment (IRIS, GYRO, OIS, White blemish)
7 : Zoom Tracking adjustment
8 : Finite Focus adjustment
9 : IRIS Diameter adjustment
10 : Sensitivity adjustment
11 : White balance adjustment (3100K)
12 : White balance adjustment (5600K)
13 : White Shading adjustment
14 : Black Blemish compensation
15 : Balance Shot adjustment*
16 : Internal Clock 27MHz adjustment
17 : Video Y/C level adjustment
18 : Eye Sensor adjustment

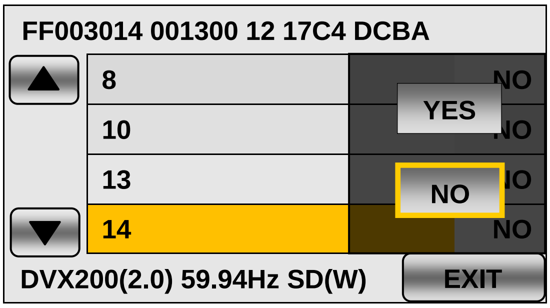
* Balance Shot adjustment is required, when the attachment position of the lens is changed.
When the main body is disassembled, please be sure to perform the Balance Shot adjustment.

Touch the ▼ of LCD.

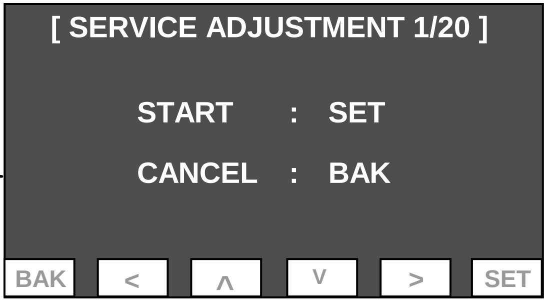


Top Screen of the service mode menu.

Touch the [14] of LCD.



Touch the [YES] of LCD.



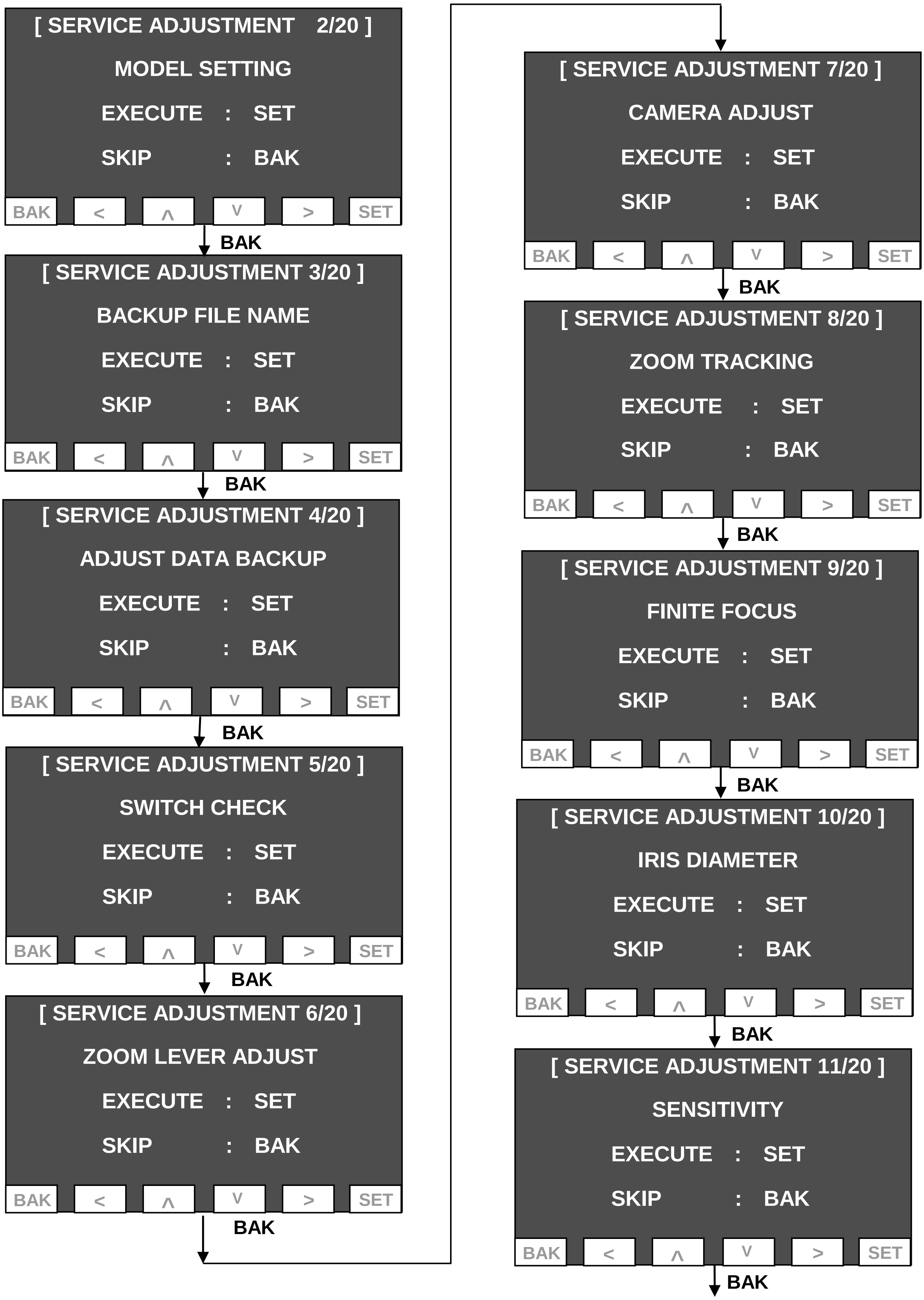
Touch the [BAK] of LCD.

SERVICE MODE is cancelled.

Touch the [SET] of LCD.

MODEL SETTING screen is displayed.

Each function screen of SERVICE ADJUSTMENT can be skipped without executing it.
For example, when only the zoom tracking needs to be adjusted, it is possible to execute only the zoom tracking adjustment and move to the adjustment completion screen.



[SERVICE ADJUSTMENT 2/20]
MODEL SETTING
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 3/20]
BACKUP FILE NAME
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 4/20]
ADJUST DATA BACKUP
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 5/20]
SWITCH CHECK
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 6/20]
ZOOM LEVER ADJUST
EXECUTE : SET
SKIP : BAK

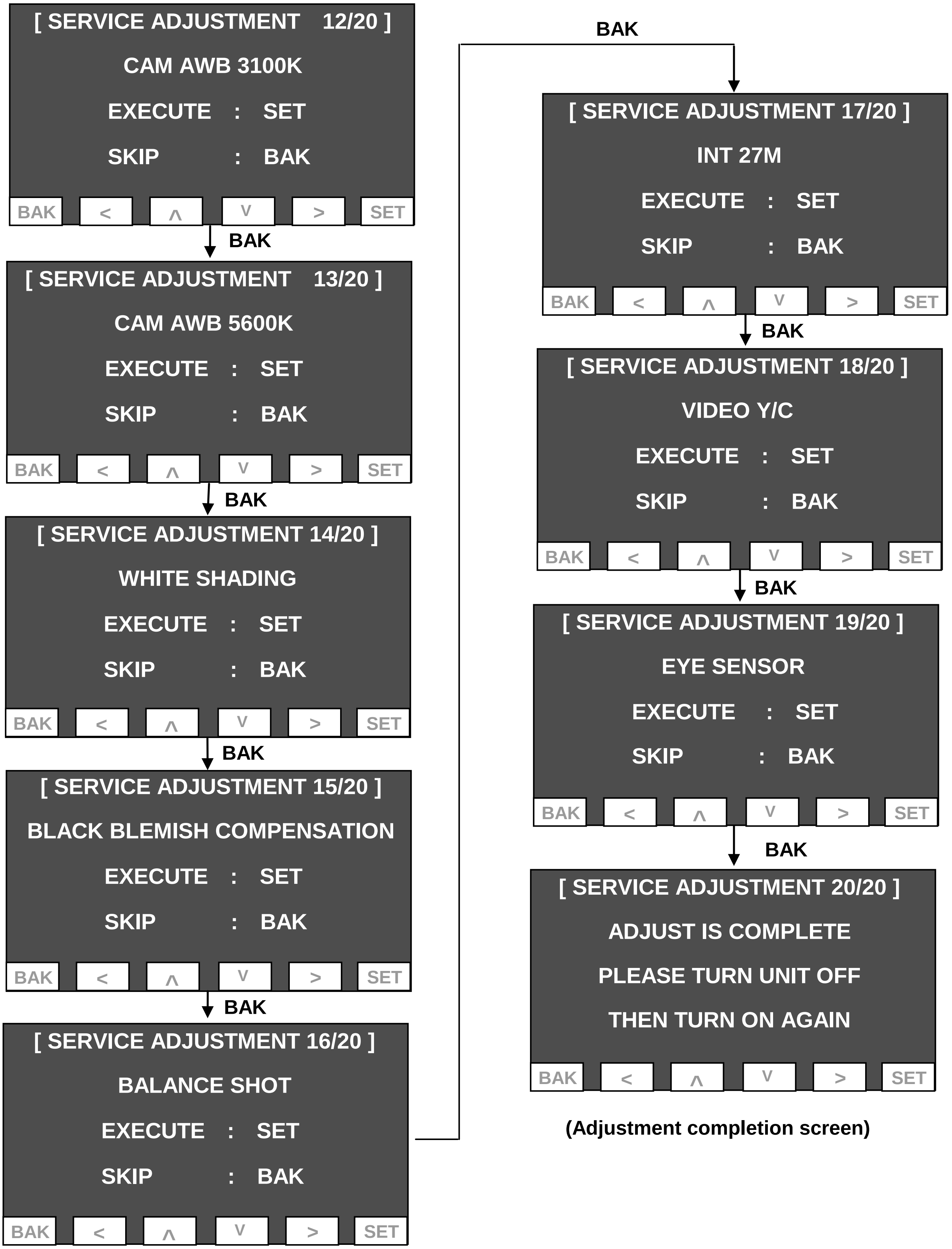
[SERVICE ADJUSTMENT 7/20]
CAMERA ADJUST
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 8/20]
ZOOM TRACKING
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 9/20]
FINITE FOCUS
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 10/20]
IRIS DIAMETER
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 11/20]
SENSITIVITY
EXECUTE : SET
SKIP : BAK



[SERVICE ADJUSTMENT 12/20]
CAM AWB 3100K
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 13/20]
CAM AWB 5600K
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 14/20]
WHITE SHADING
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 15/20]
BLACK BLEMISH COMPENSATION
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 16/20]
BALANCE SHOT
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 17/20]
INT 27M
EXECUTE : SET
SKIP : BAK

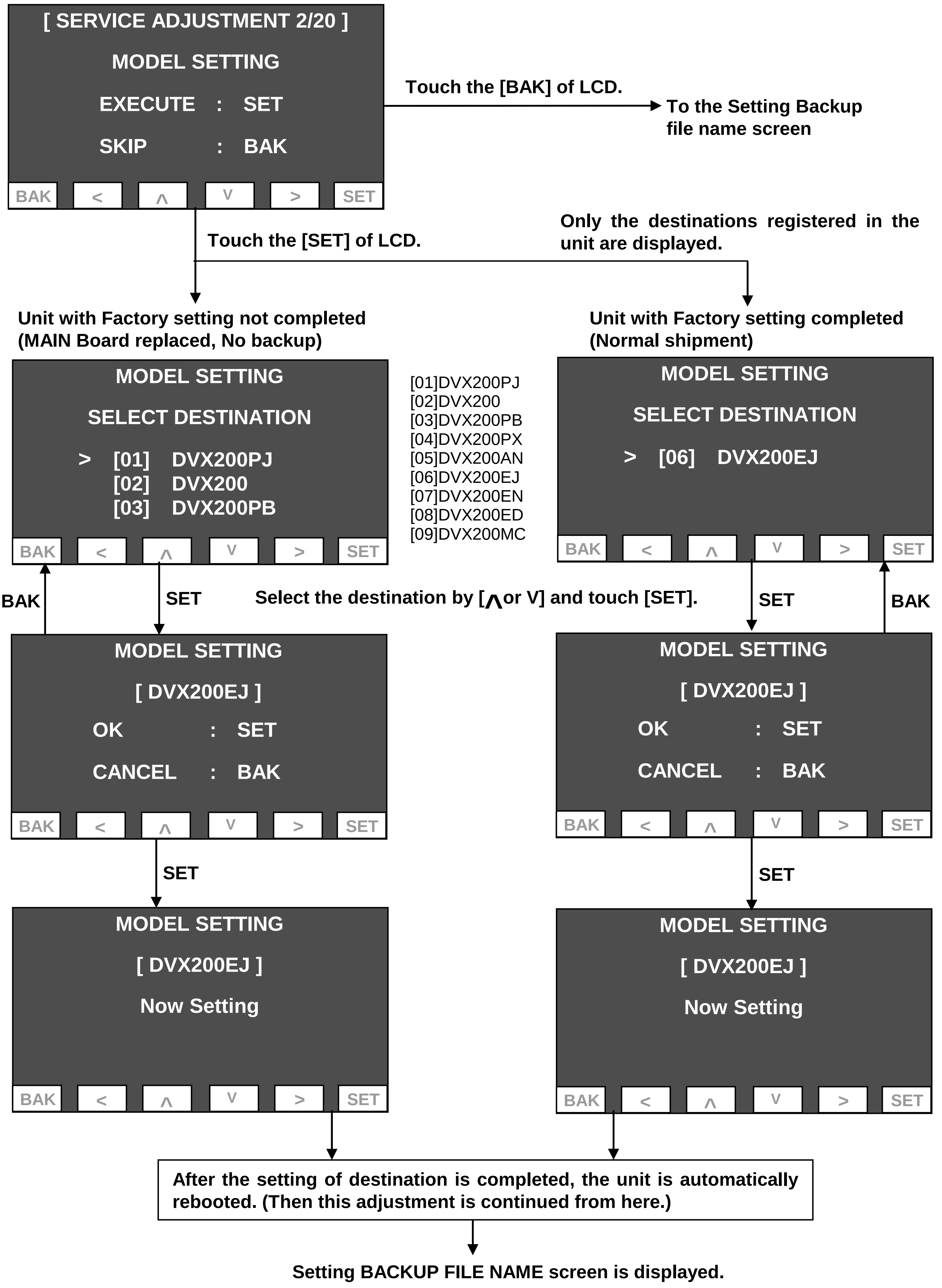
[SERVICE ADJUSTMENT 18/20]
VIDEO Y/C
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 19/20]
EYE SENSOR
EXECUTE : SET
SKIP : BAK

[SERVICE ADJUSTMENT 20/20]
ADJUST IS COMPLETE
PLEASE TURN UNIT OFF
THEN TURN ON AGAIN

(Adjustment completion screen)

3-5-1. Setting of destination



[SERVICE ADJUSTMENT 2/20]
MODEL SETTING
EXECUTE : SET
SKIP : BAK

Touch the [BAK] of LCD. → To the Setting Backup file name screen

Touch the [SET] of LCD.

Only the destinations registered in the unit are displayed.

Unit with Factory setting not completed (MAIN Board replaced, No backup)

MODEL SETTING
SELECT DESTINATION
> [01] DVX200PJ
[02] DVX200
[03] DVX200PB

[01]DVX200PJ
[02]DVX200
[03]DVX200PB
[04]DVX200PX
[05]DVX200AN
[06]DVX200EJ
[07]DVX200EN
[08]DVX200ED
[09]DVX200MC

Unit with Factory setting completed (Normal shipment)

MODEL SETTING
SELECT DESTINATION
> [06] DVX200EJ

Select the destination by [ʌ or V] and touch [SET].

MODEL SETTING
[DVX200EJ]
OK : SET
CANCEL : BAK

MODEL SETTING
[DVX200EJ]
Now Setting

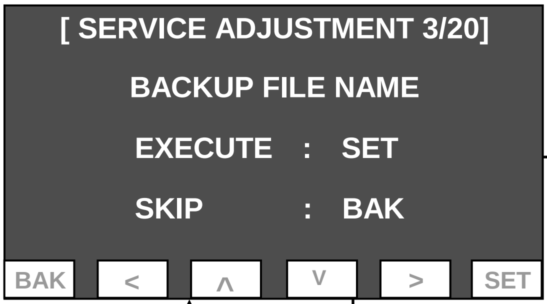
After the setting of destination is completed, the unit is automatically rebooted. (Then this adjustment is continued from here.)

Setting BACKUP FILE NAME screen is displayed.

3-5-2. Setting of Backup file name

This Backup file name is registered in Flash memory.
When Adjustment data is backed-up into SD memory card, the backup data is saved with this file name which is set in this screen.

NOTE: Setting the Serial number of camera as the Backup file name is recommended.



[SERVICE ADJUSTMENT 3/20]

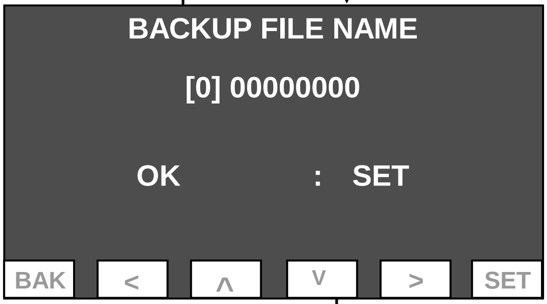
BACKUP FILE NAME

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the ADJUST DATA BACKUP screen**

BAK ↑ **SET** ↓



BACKUP FILE NAME

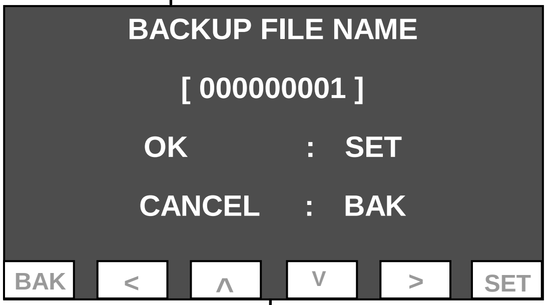
[0] 00000000

OK : SET

Set Backup file name by using <, ∧, V and >.

BAK	**: Return the previous page**
<	**: Move the cursor to the left**
∧	**: Change the character on the cursor (0 - 9, A - Z)**
V	**: Change the character on the cursor (0 - 9, A - Z)**
>	**: Move the cursor to the right**
SET	**: Next**

BAK ↑ **SET** ↓



BACKUP FILE NAME

[000000001]

OK : SET

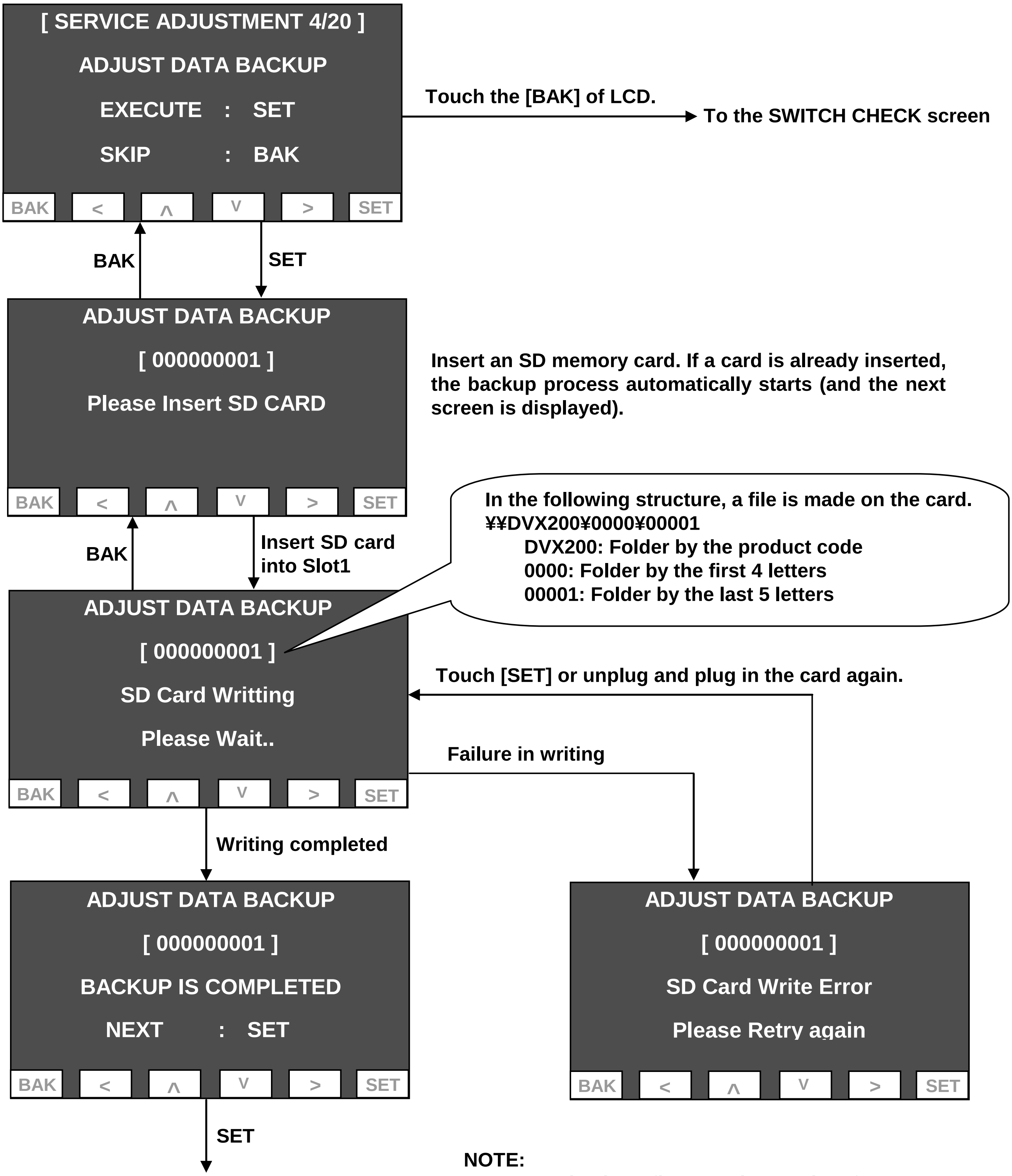
CANCEL : BAK

The registration of Backup file name to Flash completed

To the ADJUST DATA BACKUP screen

3-5-3. Adjustment Data Backup

In addition to adjustment data, the data of hour meter and error history is also stored.

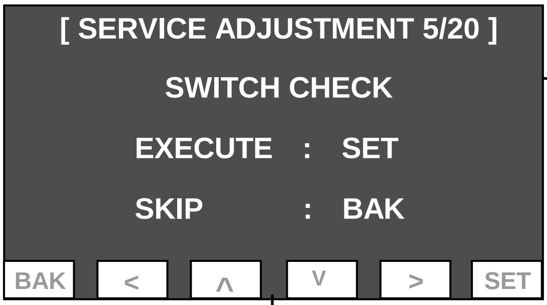


Insert an SD memory card. If a card is already inserted, the backup process automatically starts (and the next screen is displayed).

In the following structure, a file is made on the card.
¥¥DVX200¥0000¥00001
DVX200: Folder by the product code
0000: Folder by the first 4 letters
00001: Folder by the last 5 letters

NOTE:
Only one backup file can be made. If you repeat backups at the same unit, the file will be just overwritten.

3-5-4. Check of button and SW


[SERVICE ADJUSTMENT 5/20]

SWITCH CHECK

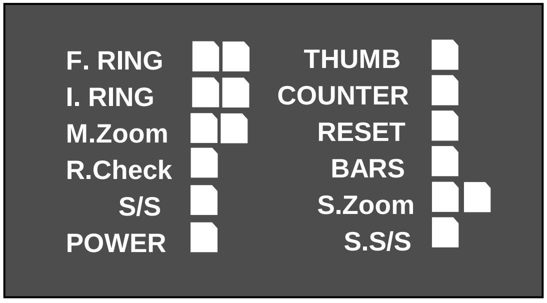
EXECUTE : SET

SKIP : BAK

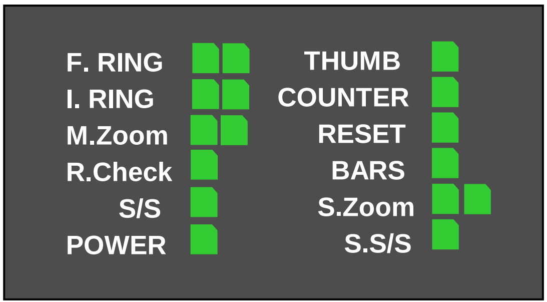
Touch the [BAK] of LCD. → To the ZOOM LEVER ADJUST screen

Current status of switches is displayed.
Circles mean as follows.
☐ : Not pressed (Not set)
🟩 : Pressed (Set)

SET

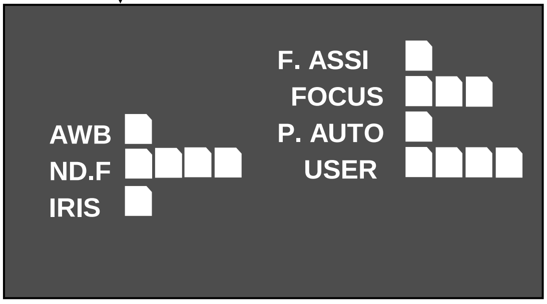

F. RING ☐☐ THUMB ☐
I. RING ☐☐ COUNTER ☐
M.Zoom ☐☐ RESET ☐
R.Check ☐ BARS ☐
S/S ☐ S.Zoom ☐☐
POWER ☐ S.S/S ☐

→

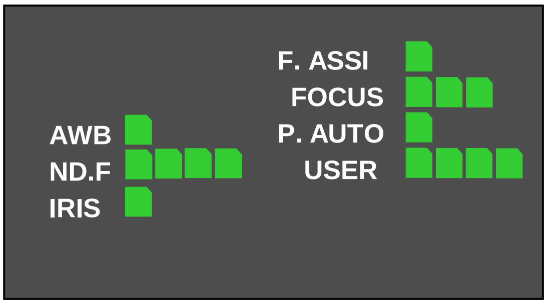

F. RING 🟩🟩 THUMB 🟩
I. RING 🟩🟩 COUNTER 🟩
M.Zoom 🟩🟩 RESET 🟩
R.Check 🟩 BARS 🟩
S/S 🟩 S.Zoom 🟩🟩
POWER 🟩 S.S/S 🟩

Press the buttons and rotate the ring. When the figure's color will change, the item is working well.

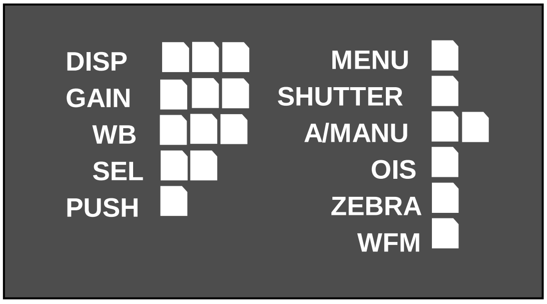
When all items are checked, the next SWITCH CHECK screen is displayed.


F. ASSI ☐
FOCUS ☐☐☐
AWB ☐ P. AUTO ☐
ND.F ☐☐☐☐ USER ☐☐☐☐
IRIS ☐

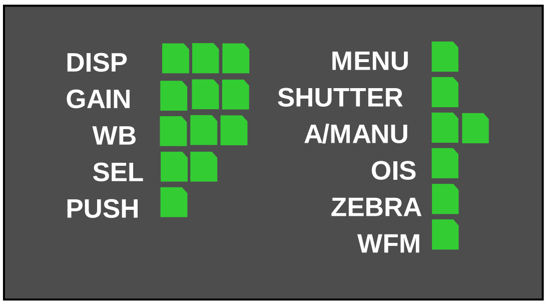
←


F. ASSI 🟩
FOCUS 🟩🟩🟩
AWB 🟩 P. AUTO 🟩
ND.F 🟩🟩🟩🟩 USER 🟩🟩🟩🟩
IRIS 🟩

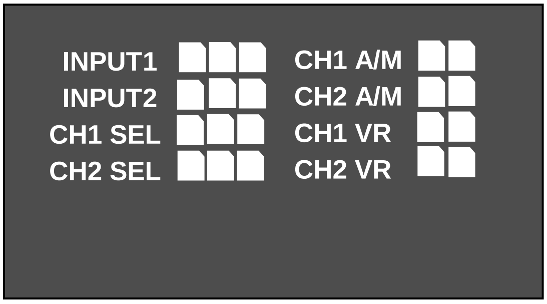
When all items are checked, the next SWITCH CHECK screen is displayed.


DISP ☐☐☐ MENU ☐
GAIN ☐☐☐ SHUTTER ☐
WB ☐☐☐ A/MANU ☐☐
SEL ☐☐ OIS ☐
PUSH ☐ ZEBRA ☐
WFM ☐

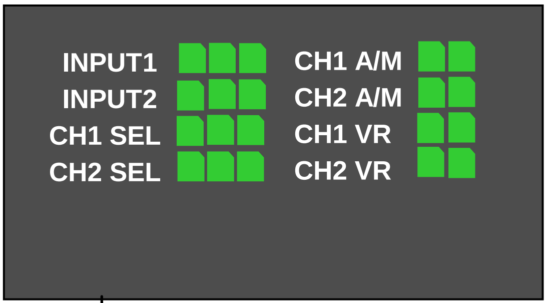
→


DISP 🟩🟩🟩 MENU 🟩
GAIN 🟩🟩🟩 SHUTTER 🟩
WB 🟩🟩🟩 A/MANU 🟩🟩
SEL 🟩🟩 OIS 🟩
PUSH 🟩 ZEBRA 🟩
WFM 🟩

When all items are checked, the next SWITCH CHECK screen is displayed.


INPUT1 ☐☐☐ CH1 A/M ☐☐
INPUT2 ☐☐☐ CH2 A/M ☐☐
CH1 SEL ☐☐☐ CH1 VR ☐☐
CH2 SEL ☐☐☐ CH2 VR ☐☐

←

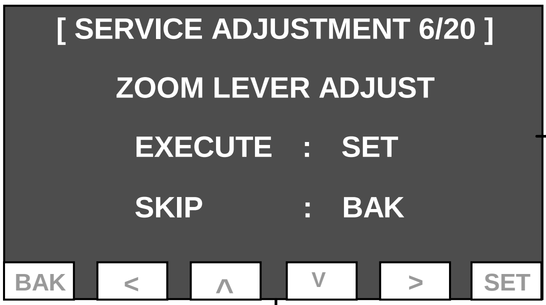

INPUT1 🟩🟩🟩 CH1 A/M 🟩🟩
INPUT2 🟩🟩🟩 CH2 A/M 🟩🟩
CH1 SEL 🟩🟩🟩 CH1 VR 🟩🟩
CH2 SEL 🟩🟩🟩 CH2 VR 🟩🟩

When all Switch items are checked, the display switches to the ZOOM LEVER ADJUST screen.

3-5-5. Zoom Lever adjustment

1. Press T side button of Zoom Lever on the Grip cover to T position fully and release the finger from the button slowly. Touch the [SET] of LCD.
2. Repeat three times from the above steps 1.
3. Press W side button of Zoom Lever on the Grip cover to W position fully and release the finger from the button slowly. Touch the [SET] of LCD.
4. Repeat three times from the above steps 3.
5. From these measurements at WIDE/TELE, the zoom lever adjustment values are calculated. If they are OK, “ADJUST OK” is displayed.

< Adjustment >


[SERVICE ADJUSTMENT 6/20]

ZOOM LEVER ADJUST

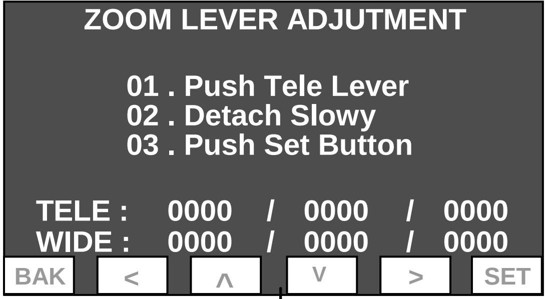
EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD.

To the CAMERA ADJUST screen

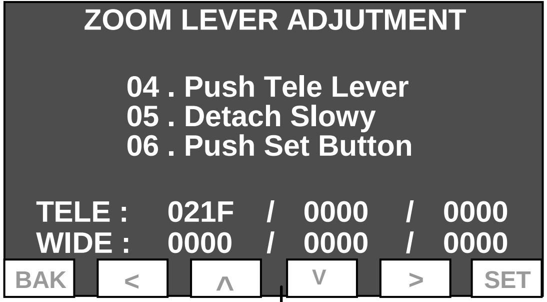
SET


ZOOM LEVER ADJUTMENT

01 . Push Tele Lever
02 . Detach Slowy
03 . Push Set Button

TELE : 0000 / 0000 / 0000
WIDE : 0000 / 0000 / 0000

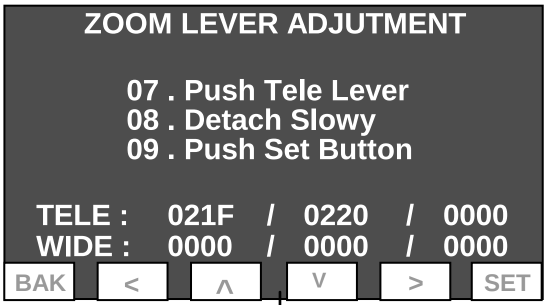
**Press the zoom lever to TELE side. Then release it slowly and touch [SET].
(When [SET] is touched, the following screen is displayed.)**


ZOOM LEVER ADJUTMENT

04 . Push Tele Lever
05 . Detach Slowy
06 . Push Set Button

TELE : 021F / 0000 / 0000
WIDE : 0000 / 0000 / 0000

**Press the zoom lever to TELE side. Then release it slowly and touch [SET].
(When [SET] is touched, the following screen is displayed.)**

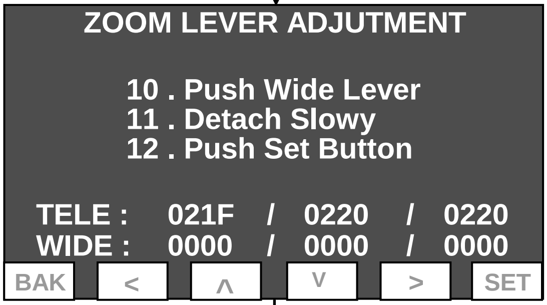

ZOOM LEVER ADJUTMENT

07 . Push Tele Lever
08 . Detach Slowy
09 . Push Set Button

TELE : 021F / 0220 / 0000
WIDE : 0000 / 0000 / 0000

**Press the zoom lever to TELE side. Then release it slowly and touch [SET].
(When [SET] is touched, the following screen is displayed.)**

(Continued on the next page)

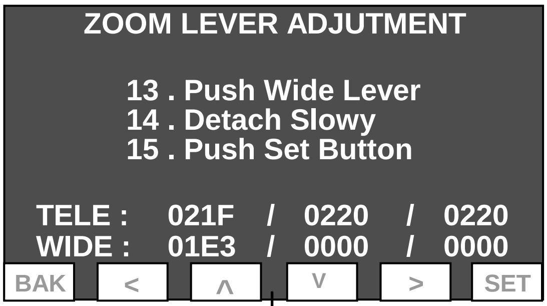


ZOOM LEVER ADJUTMENT

10 . Push Wide Lever
11 . Detach Slowy
12 . Push Set Button

TELE : 021F / 0220 / 0220
WIDE : 0000 / 0000 / 0000

Press the zoom lever to WIDE side. Then release it slowly and touch [SET].
(When [SET] is touched, the following screen is displayed.)

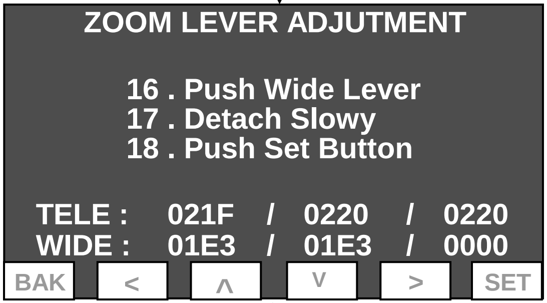


ZOOM LEVER ADJUTMENT

13 . Push Wide Lever
14 . Detach Slowy
15 . Push Set Button

TELE : 021F / 0220 / 0220
WIDE : 01E3 / 0000 / 0000

Press the zoom lever to WIDE side. Then release it slowly and touch [SET].
(When [SET] is touched, the following screen is displayed.)



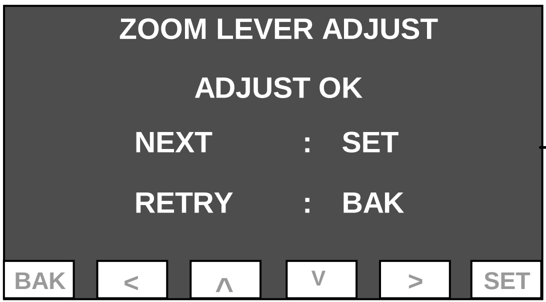
ZOOM LEVER ADJUTMENT

16 . Push Wide Lever
17 . Detach Slowy
18 . Push Set Button

TELE : 021F / 0220 / 0220
WIDE : 01E3 / 01E3 / 0000

Press the zoom lever to WIDE side. Then release it slowly and touch [SET].
(When [SET] is touched, the following screen is displayed.)

When [SET] is touched, the zoom lever adjustment values are calculated from the measurements at WIDE/TELE. If they are OK, "ADJUST OK" is displayed.



ZOOM LEVER ADJUST

ADJUST OK

NEXT : SET

RETRY : BAK

Touch the [BAK] of LCD.

If the adjustment needs to be retried, touch [BAK].
The display returns to the first screen of ZOOM LEVER ADJUST.

SET

To the CAMERA ADJUST screen

3-5-6. CAMERA adjustment

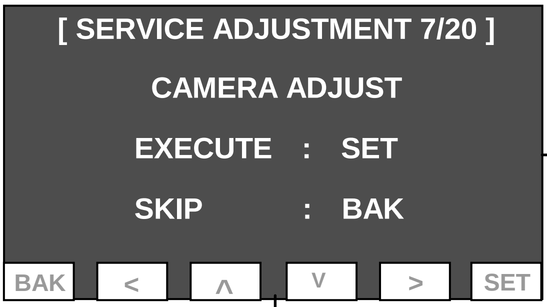
On the CAMERA ADJUST screen, the following adjustments and confirmations are automatically executed and their results are displayed.

< Adjustment / Confirmation items >

LOCK	Confirmation that the lens is not locked
GYRO	GYRO DC compensation adjustment
IRIS	IRIS adjustment
OIS	OIS adjustment
KIZU	White blemish compensation
RTC	Confirmation that the RTC is working
KEY	Confirmation that PUSH SWs are not left pressed

NOTE: PUSH SW includes the buttons and SWs shown in Item 3-5-4.

< Adjustment >



[SERVICE ADJUSTMENT 7/20]

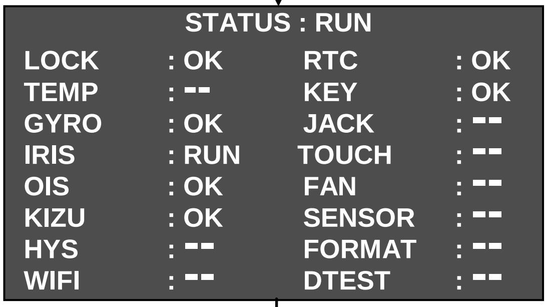
CAMERA ADJUST

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the ZOOM TRACKING screen**

Touch [SET] to start the adjustments / confirmations.



```
              STATUS : RUN
LOCK     : OK        RTC      : OK
TEMP     : --        KEY      : OK
GYRO     : OK        JACK     : --
IRIS     : RUN       TOUCH    : --
OIS      : OK        FAN      : --
KIZU     : OK        SENSOR   : --
HYS      : --        FORMAT   : --
WIFI     : --        DTEST    : --
```

When the adjustments / confirmations are completed (all the items are OK), the display switches to the ZOOM TRACKING screen.

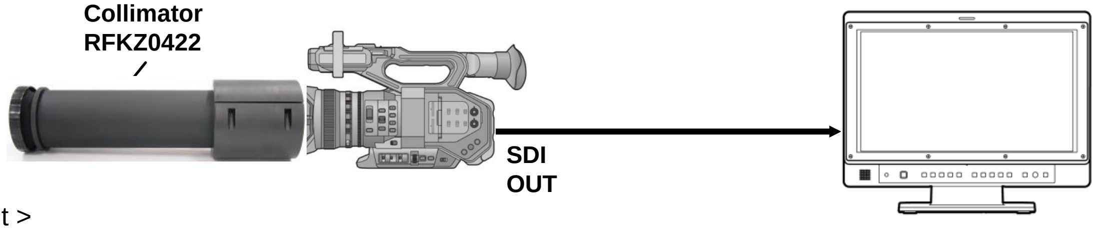
3-5-7. Zoom Tracking adjustment

< Preparation >

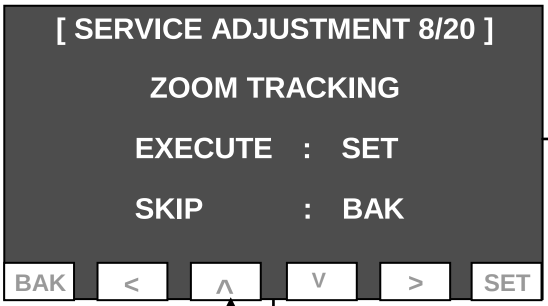
1. Set “OUTPUT SEL” in “OUTPUT SETUP” menu to “SDI+AV”.
2. Set the mode switch as follows.
   - ND filter : OFF
   - FOCUS A/M/∞ : AUTO
   - ZOOM SW : SERVO
   - AUTO/MANU SW : AUTO
3. Set the Collimator to the front of Lens.

NOTE: This adjustment can be done under a fluorescent light. Please make sure that there is no flicker.
If the luminance is too high or too low, adjustment error may occur.

< Connection >



< Adjustment >


[SERVICE ADJUSTMENT 8/20]

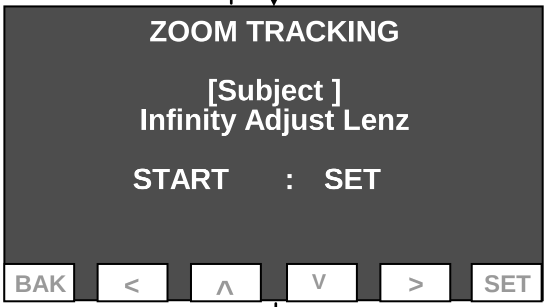
ZOOM TRACKING

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the FINIT FOCUS screen**

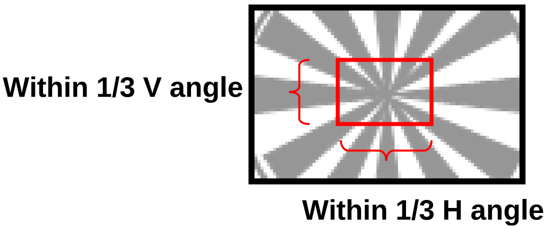
BAK ↑ ↓ **SET**


ZOOM TRACKING

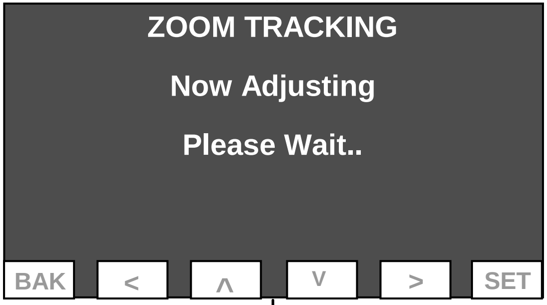
[Subject]
Infinity Adjust Lenz

START : SET

Set the zoom position to the TELE terminal and fix the Collimator again so that the center of the chart is located right at the center of the screen.



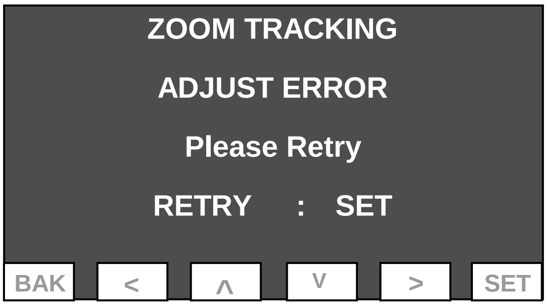
Touch [SET] to start the adjustment / confirmation.


ZOOM TRACKING

Now Adjusting

Please Wait..

Adjustment NG →


ZOOM TRACKING

ADJUST ERROR

Please Retry

RETRY : SET

When the adjustment is completed, the display switches to the FINIT FOCUS screen.

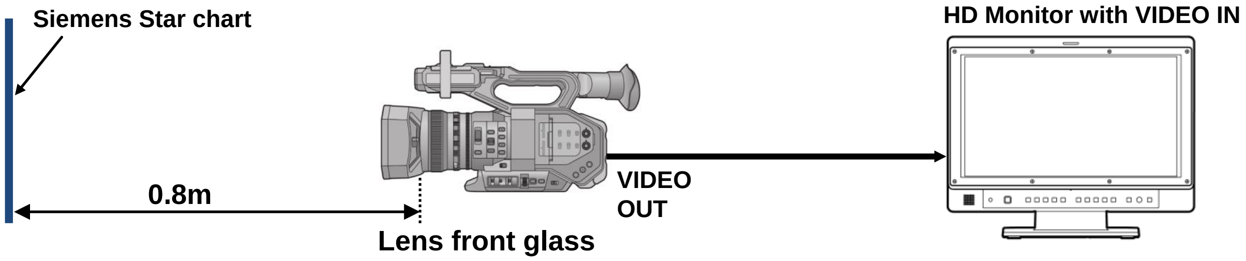
3-5-8. Finite Focus adjustment

< Preparation >

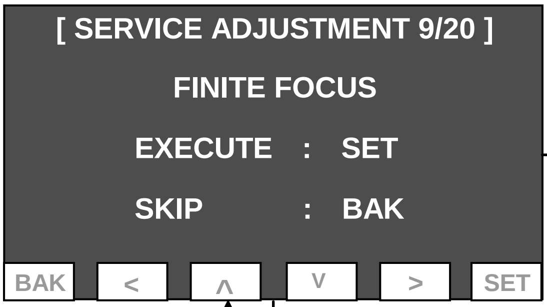
1. Print out Siemens Star Chart with A3 paper.
2. Set the Siemens Star Chart on all white wall, or A1 size white paper.
   NOTE: Any objects other than the chart does not exist at Wide terminal.
3. Set the Camera position so that the distance between Siemens Star Chart and Lens is **0.8m**.
4. Set the Halogen lamp position so that the lux on the chart is approx. **270 lux**.
5. Set “OUTPUT SEL” in “OUTPUT SETUP” menu to “SDI +AV”.
6. Set the mode switch as follows.
   - ND filter : OFF
   - FOCUS A/M/∞ : AUTO
   - ZOOM SW : SERVO
   - AUTO/MANU SW : AUTO

NOTE: This adjustment can be done under a fluorescent light. Please make sure that there is no flicker.
When this adjustment is done, recording format is automatically changed to UHD mode.
So, SDI output is not available.

< Connection >



< Adjustment >


[SERVICE ADJUSTMENT 9/20]

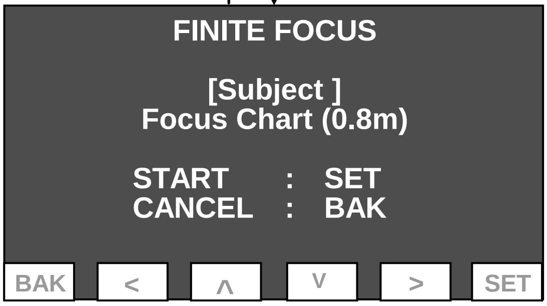
FINITE FOCUS

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the IRIS DIAMETER screen**

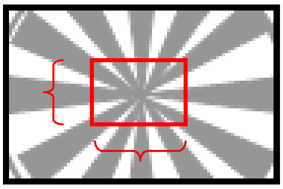
BAK ↑ ↓ **SET**


FINITE FOCUS

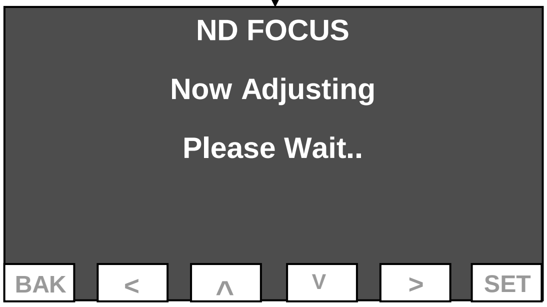
[Subject]
Focus Chart (0.8m)

START : SET
CANCEL : BAK

Set the zoom position to the TELE terminal and set the Camera position so that the center of the chart is located right at the center of the screen.
There is no object except Siemens Star chart at the WIDE terminal.



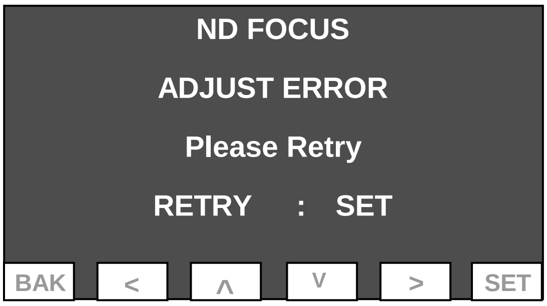
↓ **Touch [SET] to start the adjustment / confirmation.**


ND FOCUS

Now Adjusting

Please Wait..

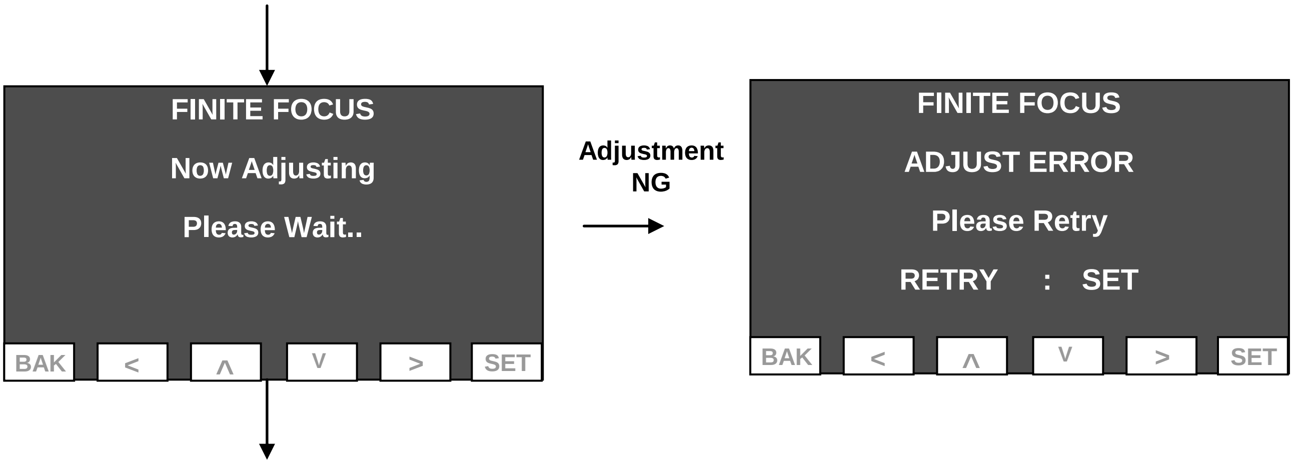
Adjustment NG →


ND FOCUS

ADJUST ERROR

Please Retry

RETRY : SET



FINITE FOCUS

Now Adjusting

Please Wait..

FINITE FOCUS

ADJUST ERROR

Please Retry

RETRY : SET

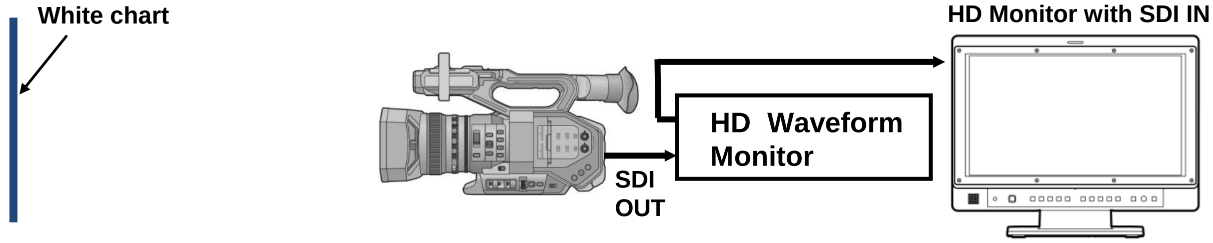
When the adjustment is completed, the display switches to the IRIS DIAMETER screen.

3-5-9. IRIS Diameter adjustment

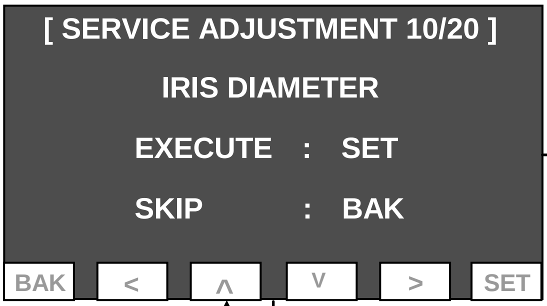
< Preparation >

1. Shoot the White chart at Wide terminal.
2. Set the Halogen lamp position so that the color temperature and lux of whole white chart is 3100K / 2000 lux.
3. Set “OUTPUT SEL” in “OUTPUT SETUP” menu to “SDI+AV”.
4. Set the mode switch as follows.
    - ND filter : OFF
    - FOCUS A/M/∞ : AUTO
    - ZOOM SW : SERVO
    - AUTO/MANU SW : AUTO

< Connection >



< Adjustment >



[SERVICE ADJUSTMENT 10/20]

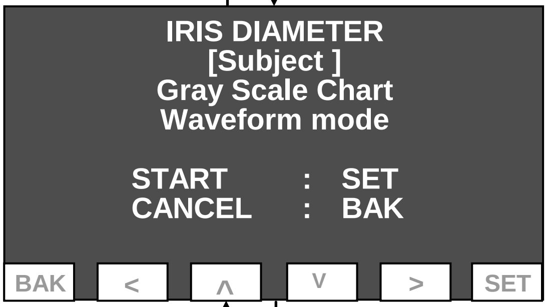
IRIS DIAMETER

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → To the SENSITIVITY screen

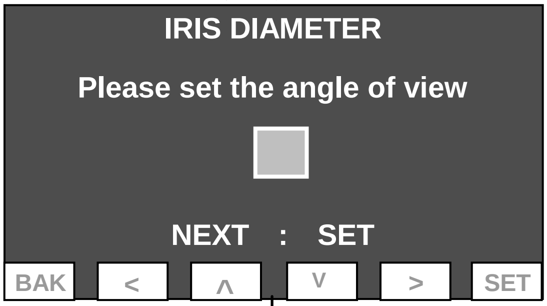
BAK ↑ ↓ SET



IRIS DIAMETER
[Subject]
Gray Scale Chart
Waveform mode

START : SET
CANCEL : BAK

BAK ↑ ↓ Touch [SET] to the next setting



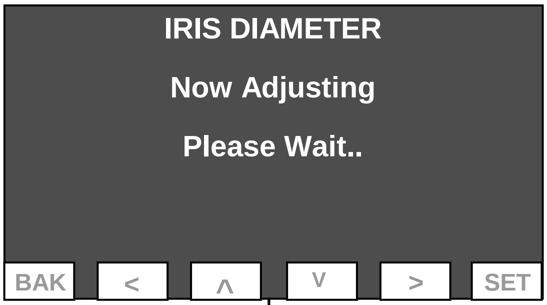
IRIS DIAMETER

Please set the angle of view

NEXT : SET

*-”Gray Scale Chart” is shown in the menu but please use White Chart for the adjustment.
-Gray Scale Chart is factory use only.
-“Set the angle of view” is only used when using Gray Scale Chart

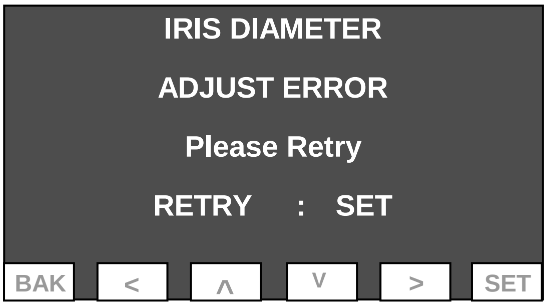
↓ Touch [SET] to start the adjustment / confirmation.


IRIS DIAMETER

Now Adjusting

Please Wait..

Adjustment
NG


IRIS DIAMETER

ADJUST ERROR

Please Retry

RETRY : SET

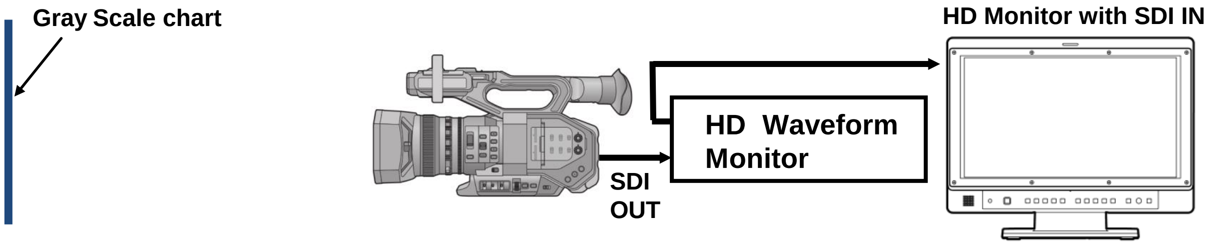
When the adjustment is completed, the display switches to the SENSITIVITY screen.

3-5-10. Sensitivity adjustment

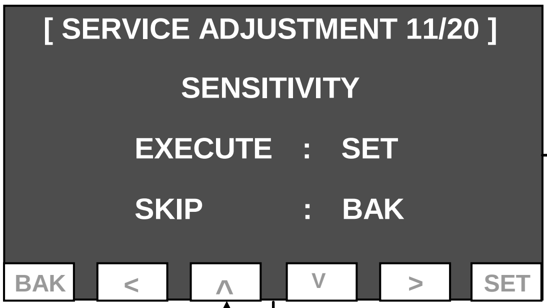
< Preparation >

1. Shoot the Center White of the Gray scale chart at Tele terminal.
2. Set the Halogen lamp position so that the color temperature and lux on the Center White is 3100K / 2000 lux.

< Connection >



< Adjustment >



[SERVICE ADJUSTMENT 11/20]

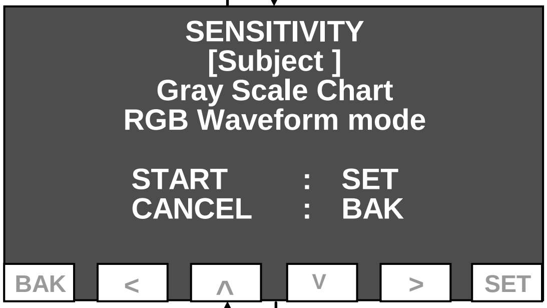
SENSITIVITY

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → To the CAM AWB 3100K screen

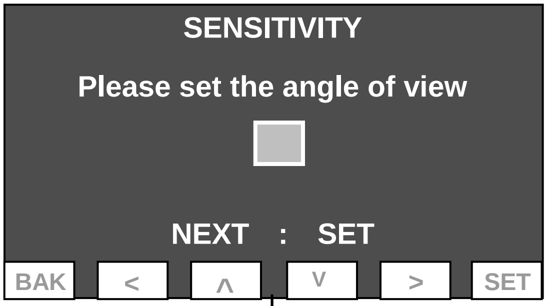
BAK ↑ ↓ SET



SENSITIVITY
[Subject]
Gray Scale Chart
RGB Waveform mode

START : SET
CANCEL : BAK

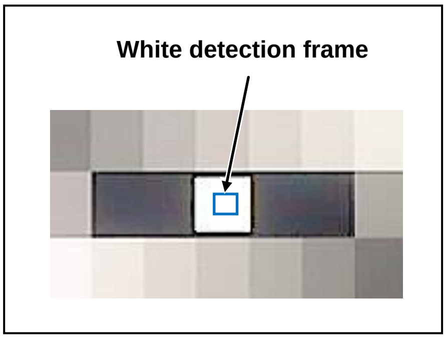
BAK ↑ ↓ Touch [SET] to the next setting



SENSITIVITY

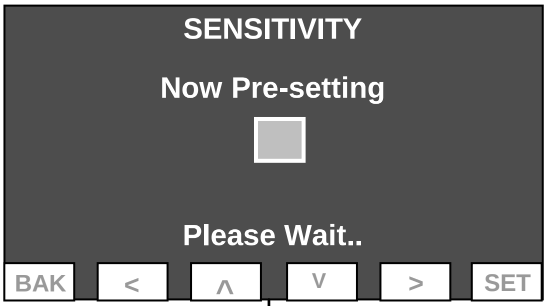
Please set the angle of view

NEXT : SET



Set the zoom position to the TELE terminal and set the Camera position so that the center white of the chart is reflected in the white detection frame of the LCD panel.

↓ Touch [SET] to start the adjustment setting.

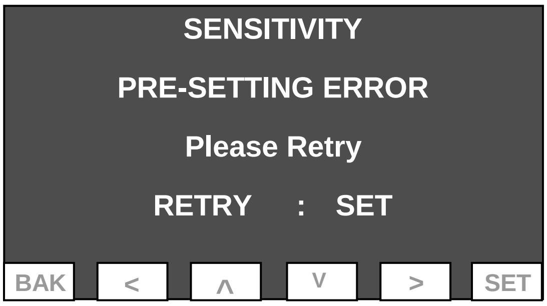


SENSITIVITY

Now Pre-setting

Please Wait..

Setting NG

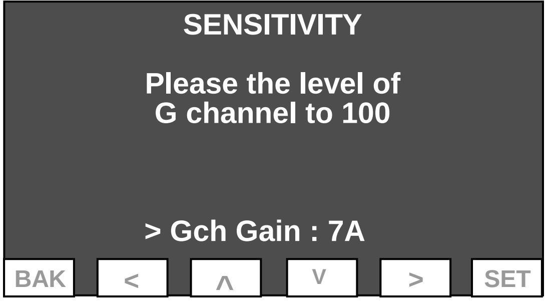


SENSITIVITY

PRE-SETTING ERROR

Please Retry

RETRY : SET



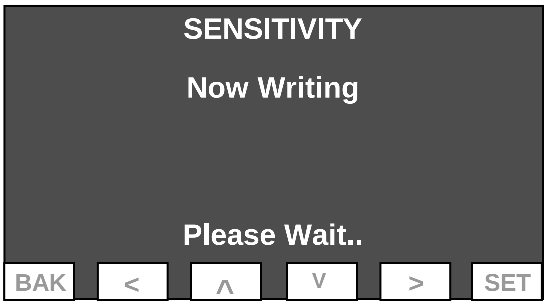
SENSITIVITY

Please the level of G channel to 100

> Gch Gain : 7A

Adjust G-ch level with < or > key on the touch panel so that the G-ch level of the Center White becomes to 100%.

After the adjustment, touch [SET] to save the adjustment data.

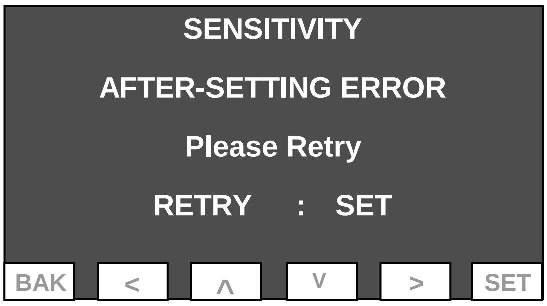


SENSITIVITY

Now Writing

Please Wait..

Saving NG

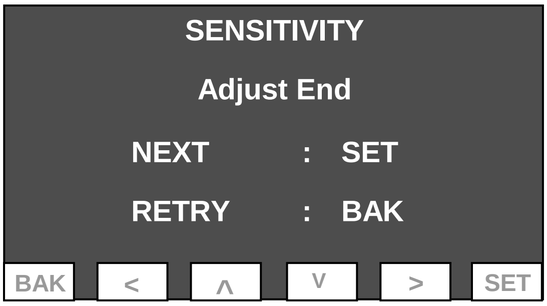


SENSITIVITY

AFTER-SETTING ERROR

Please Retry

RETRY : SET



SENSITIVITY

Adjust End

NEXT : SET

RETRY : BAK

When the adjustment is completed, touch [SET].

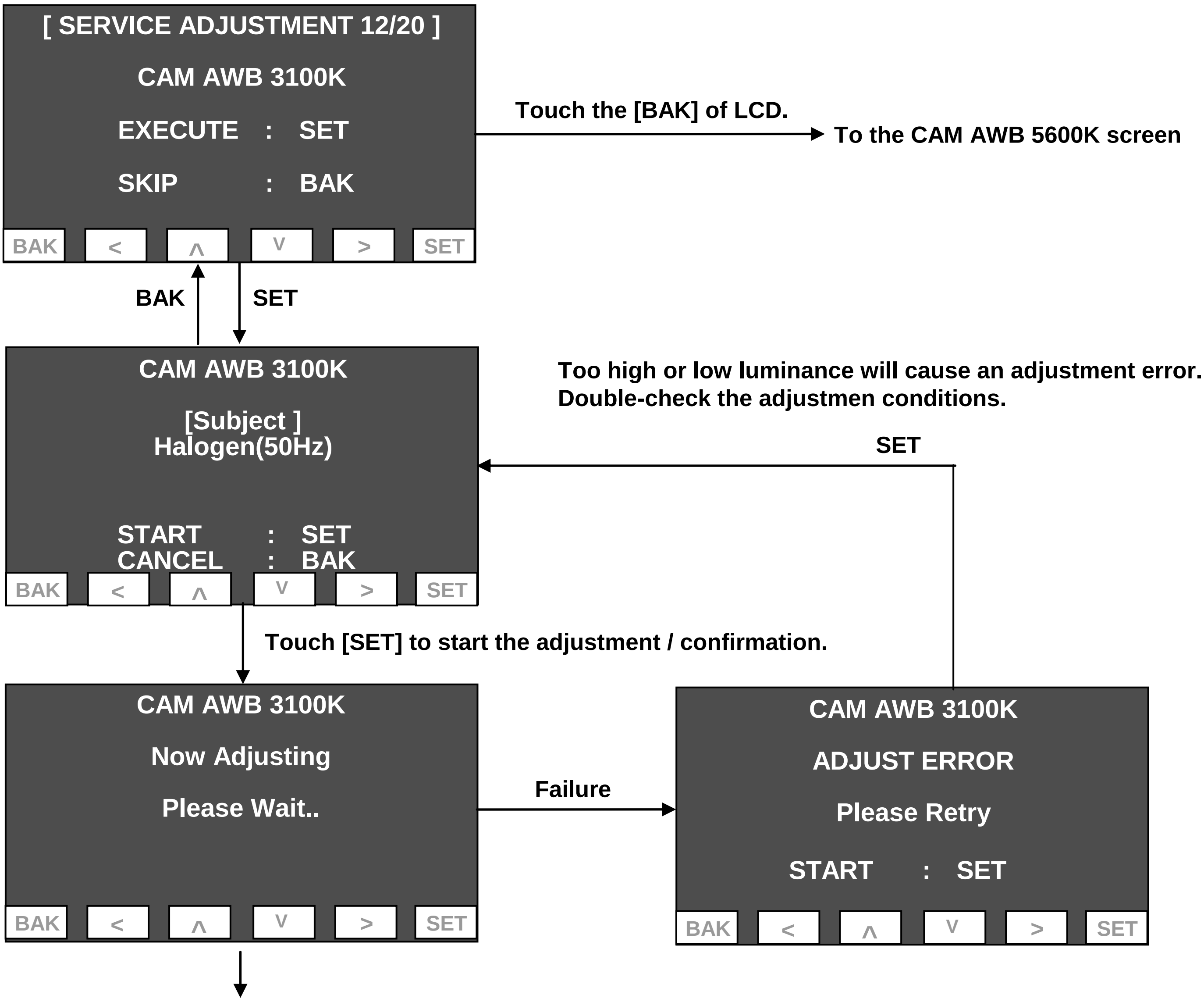
When the adjustment is completed, the display switches to the CAM AWB 3100K screen.

3-5-11. White balance (3100K) adjustment

< Preparation >

1. Aim the Camera-Recorder at White chart under the Halogen lamp condition (3100K, 2000Lux).
2. Please confirm if the White level is from 50% to 70 %.

< Adjustment >



[SERVICE ADJUSTMENT 12/20]

CAM AWB 3100K

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD.

To the CAM AWB 5600K screen

CAM AWB 3100K

[Subject]
Halogen(50Hz)

START : SET
CANCEL : BAK

Too high or low luminance will cause an adjustment error.
Double-check the adjustmen conditions.

Touch [SET] to start the adjustment / confirmation.

CAM AWB 3100K

Now Adjusting

Please Wait..

CAM AWB 3100K

ADJUST ERROR

Please Retry

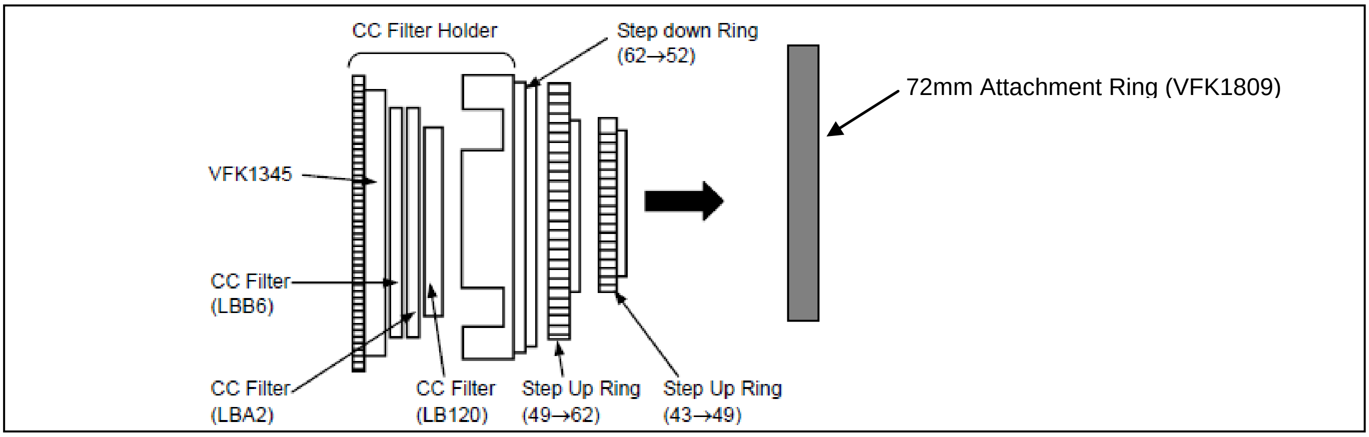
START : SET

When the adjustment is completed, the display switches to the CAM AWB 5600K screen.

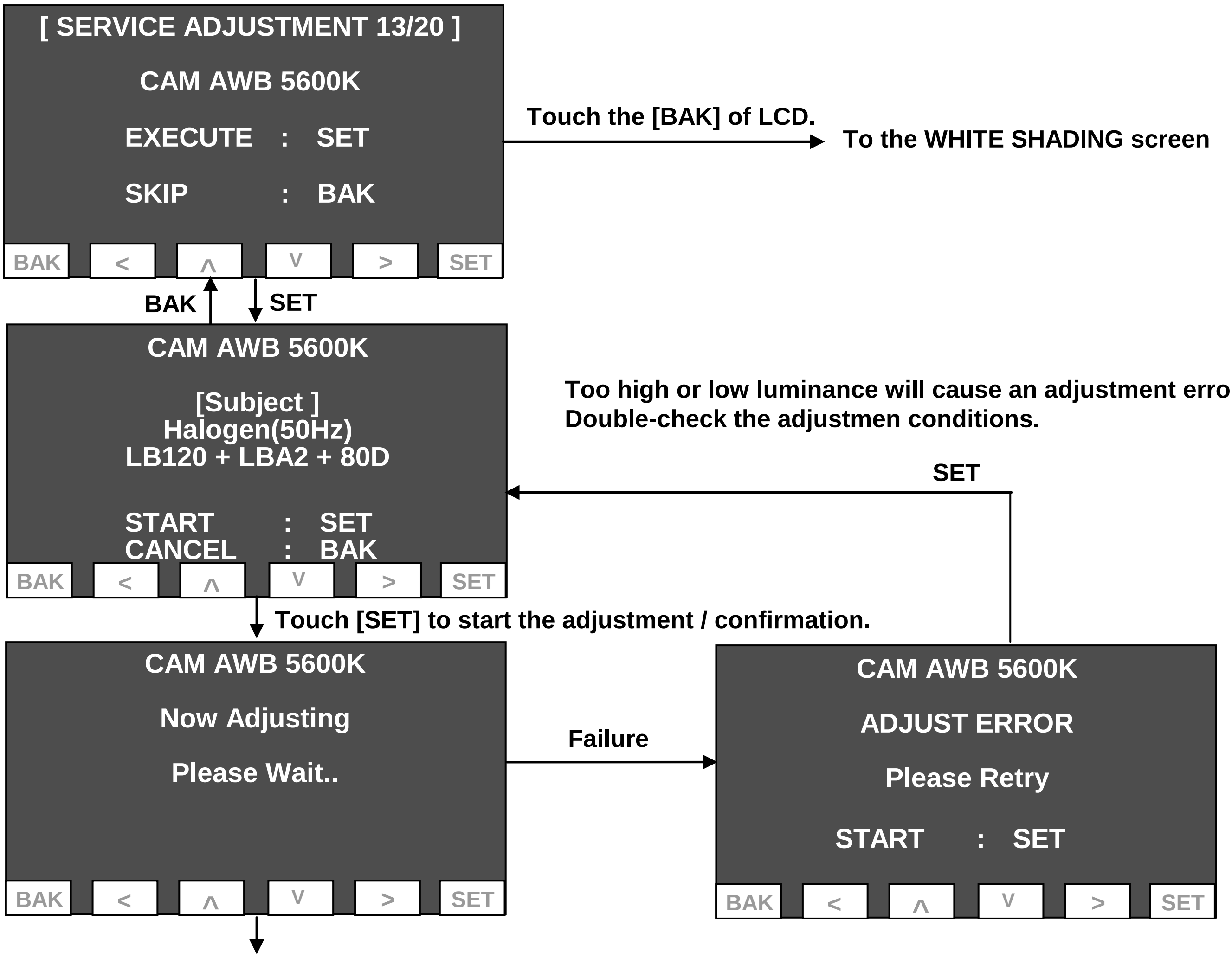
3-5-12. White blance (5600K) adjustment

< Preparation >

1. Set the CC filter (LB120: VFK1347), (LBA2: VFK1884), and (LBB6: VFK1888) to the CC Filter Holder (VFK1345) as shown in figure.
2. Set the one Step-down Ring (VFK1346: 62 → 52), Step-up Ring (VFK1660: 49 → 62), and Step-up Ring (VFK1659: 43 → 49) to the CC Filter Holder as shown in figure.
3. Set 72mm Attachment Ring (VFK1809) to the front of Lens.
4. Set the Step-up Ring (with VFK1345 and VFK1346) to the 72mm Attachment Ring (VFK1809).
5. Aim the Camera-Recorder at White chart under the Halogen lamp condition (3100K, 2000Lux).
6. Please confirm if the White level is from 50% to 70 %.
   If the luminace is not enough, please set the Halogen lamp closer and make the Lux value higer.



< Adjustment >



[SERVICE ADJUSTMENT 13/20]

CAM AWB 5600K

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD.

To the WHITE SHADING screen

CAM AWB 5600K

[Subject]
Halogen(50Hz)
LB120 + LBA2 + 80D

START : SET
CANCEL : BAK

Too high or low luminance will cause an adjustment error.
Double-check the adjustmen conditions.

Touch [SET] to start the adjustment / confirmation.

CAM AWB 5600K

Now Adjusting

Please Wait..

CAM AWB 5600K

ADJUST ERROR

Please Retry

START : SET

When the adjustment is completed, the display switches to the WHITE SHADING screen.

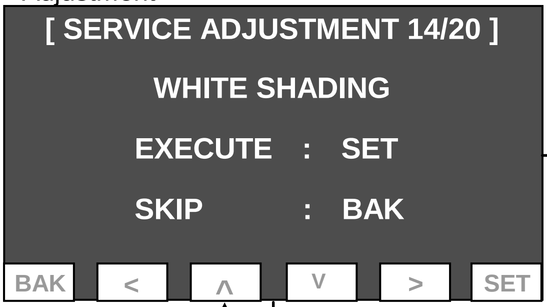
3-5-13. White Shading adjustment

< Preparation >

1. Shoot the White chart under a halogen lamp (3100K).
3. Set Camera to the following condition.
   - ● ZOOM position : Wide terminal
   - ● Set up White chart position so that the whole chart is reflected.
   - ● The same white level in the whole screen

NOTE: When this adjustment is done, recording format is automatically changed to “4K 2160 / 24.00p”**mode.**

< Adjustment >


[SERVICE ADJUSTMENT 14/20]

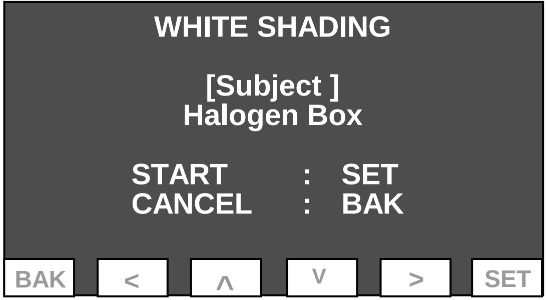
WHITE SHADING

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the BLACK BLEMISH COMPENSATION screen**

BAK ↑ ↓ **SET**

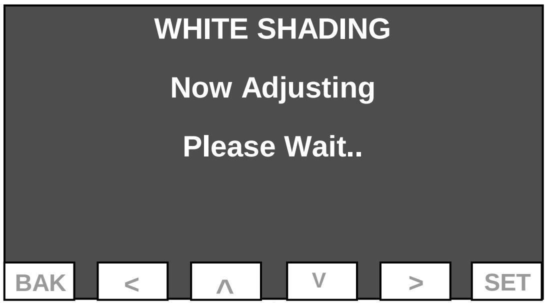

WHITE SHADING

[Subject]
Halogen Box

START : SET
CANCEL : BAK

Set the zoom position to the WIDE terminal and set the White chart position so that the whole chart is reflected in the LCD panel.

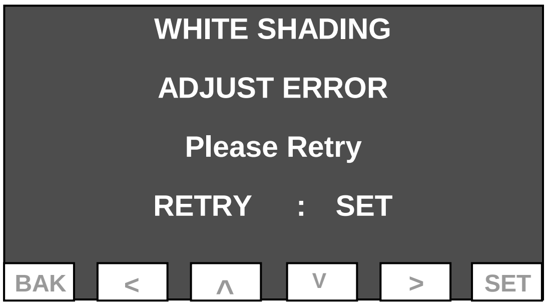
↓ **SET**


WHITE SHADING

Now Adjusting

Please Wait..

Adjustment NG →


WHITE SHADING

ADJUST ERROR

Please Retry

RETRY : SET

↓ **Adjustment OK**

When the adjustment is completed, the display switches to the BLACK BLEMISH COMPENSATION screen.

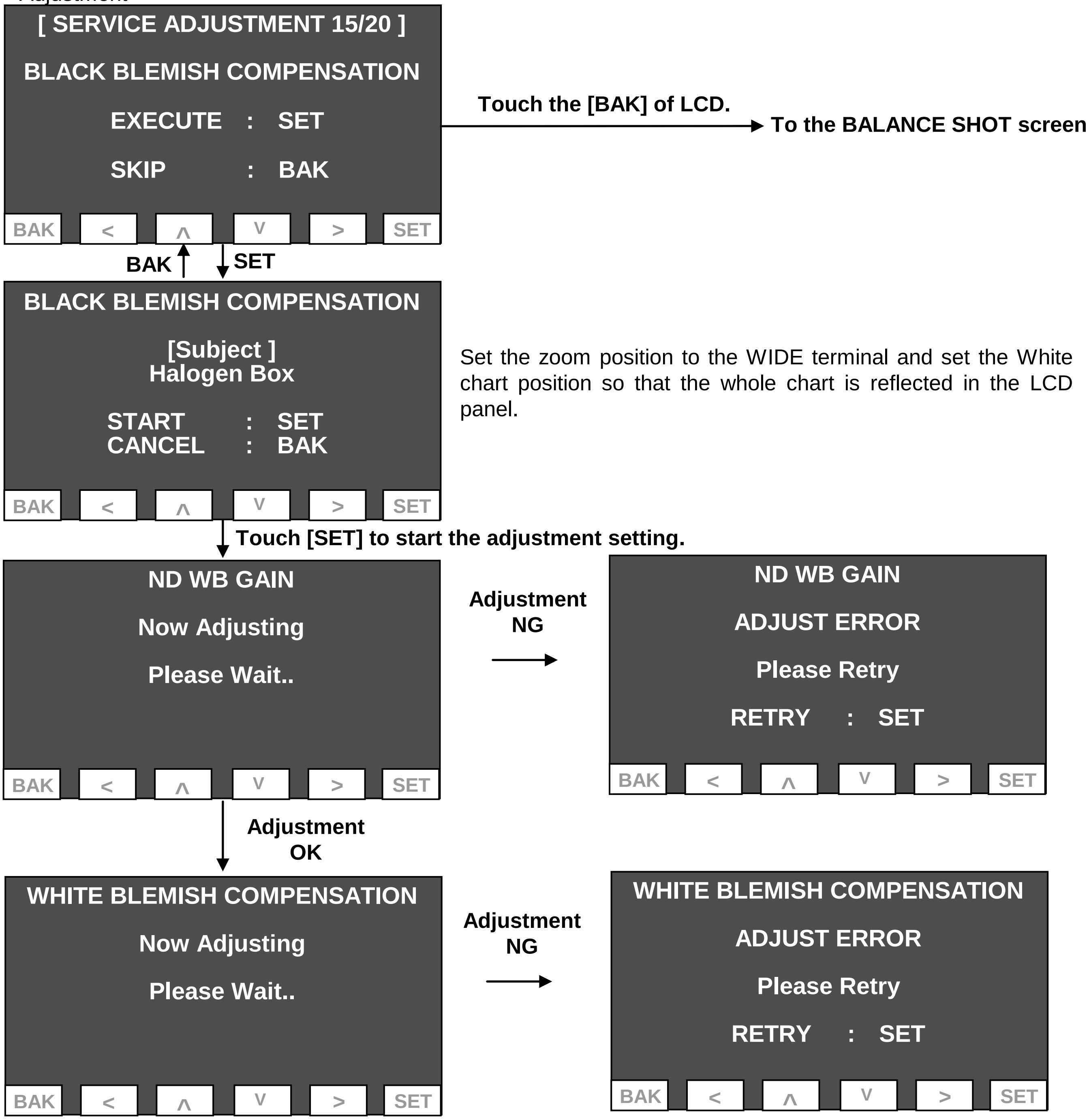
3-5-14. Blemish Compensation adjustment

< Preparation >

1. Shoot the White chart under a halogen lamp (3100K).
2. Set Camera to the following condition.
   - ● ZOOM position : Wide terminal
   - ● Set up White chart position so that the whole chart is reflected.
   - ● The same white level in the whole screen

NOTE: When this adjustment is done, recording format is automatically changed to “UHD 2160/ 29.97p”.mode.

< Adjustment >



[SERVICE ADJUSTMENT 15/20]
BLACK BLEMISH COMPENSATION
EXECUTE : SET
SKIP : BAK

Touch the [BAK] of LCD. → **To the BALANCE SHOT screen**

BAK ↑ ↓ **SET**

BLACK BLEMISH COMPENSATION
[Subject]
Halogen Box
START : SET
CANCEL : BAK

Set the zoom position to the WIDE terminal and set the White chart position so that the whole chart is reflected in the LCD panel.

Touch [SET] to start the adjustment setting.

ND WB GAIN
Now Adjusting
Please Wait..

Adjustment NG →

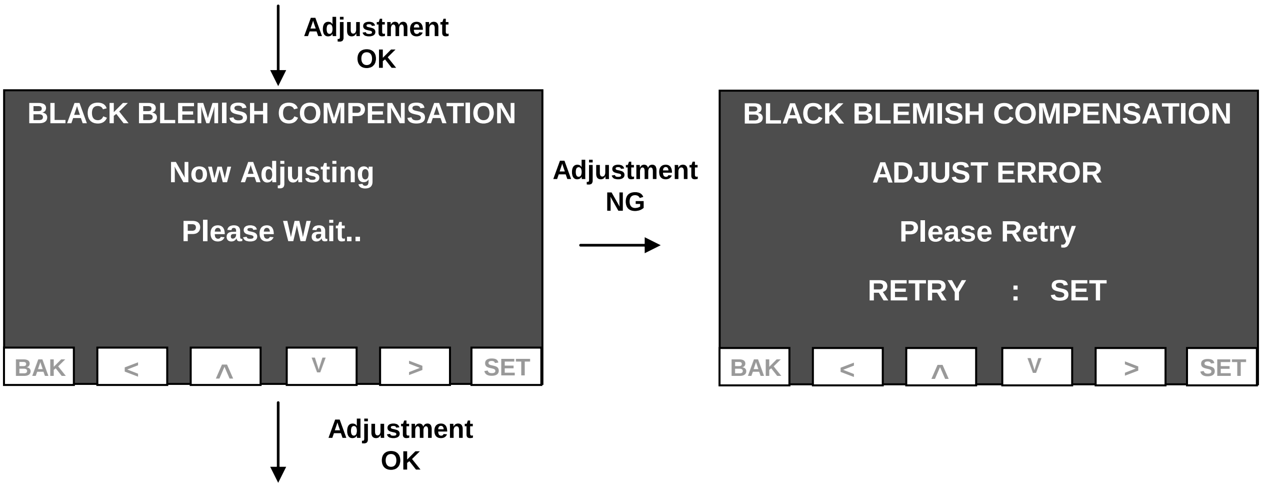
ND WB GAIN
ADJUST ERROR
Please Retry
RETRY : SET

Adjustment OK ↓

WHITE BLEMISH COMPENSATION
Now Adjusting
Please Wait..

Adjustment NG →

WHITE BLEMISH COMPENSATION
ADJUST ERROR
Please Retry
RETRY : SET



BLACK BLEMISH COMPENSATION

Now Adjusting

Please Wait..

BLACK BLEMISH COMPENSATION

ADJUST ERROR

Please Retry

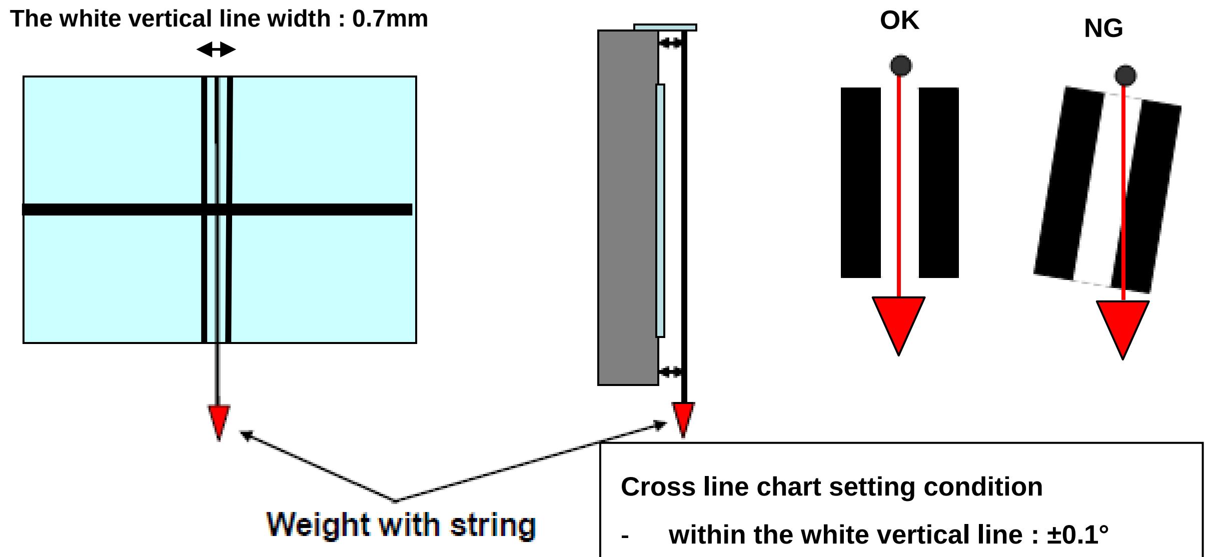
RETRY : SET

When the adjustment is completed, the display switches to the BALANCE SHOT screen.

3-5-15. Balance Shot adjustment

< Preparation >

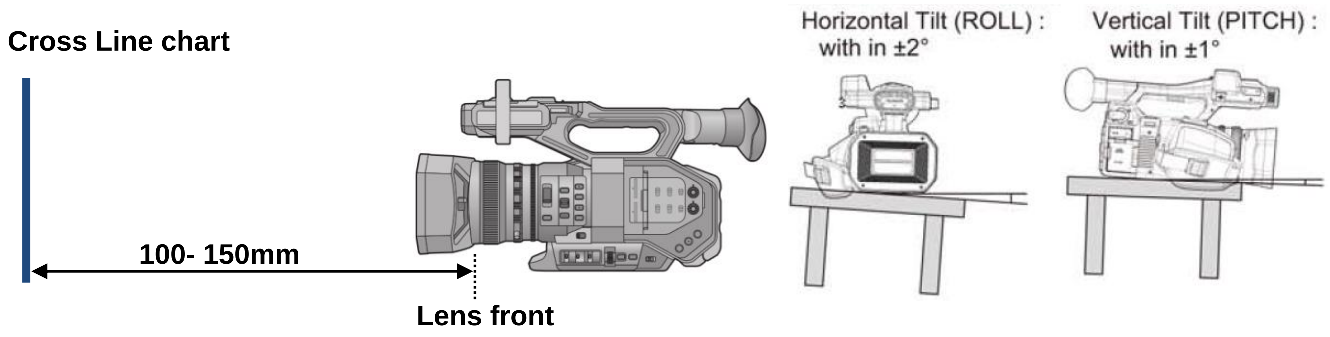
1. Print out the Cross Line chart described in the last page of Service Information. (A4 size)
2. Set the Cross Line chart so that the string is inside the white vertical line as shown in the following figure.



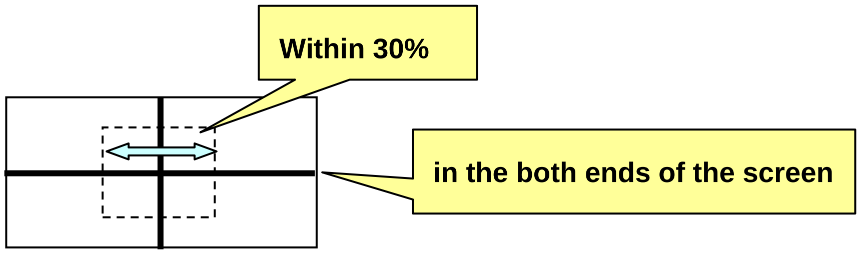
Cross line chart setting condition

- **within the white vertical line : ±0.1°**
- **Holizontal tilting : ± 5°**
- **Vertical tilting : ± 5°**

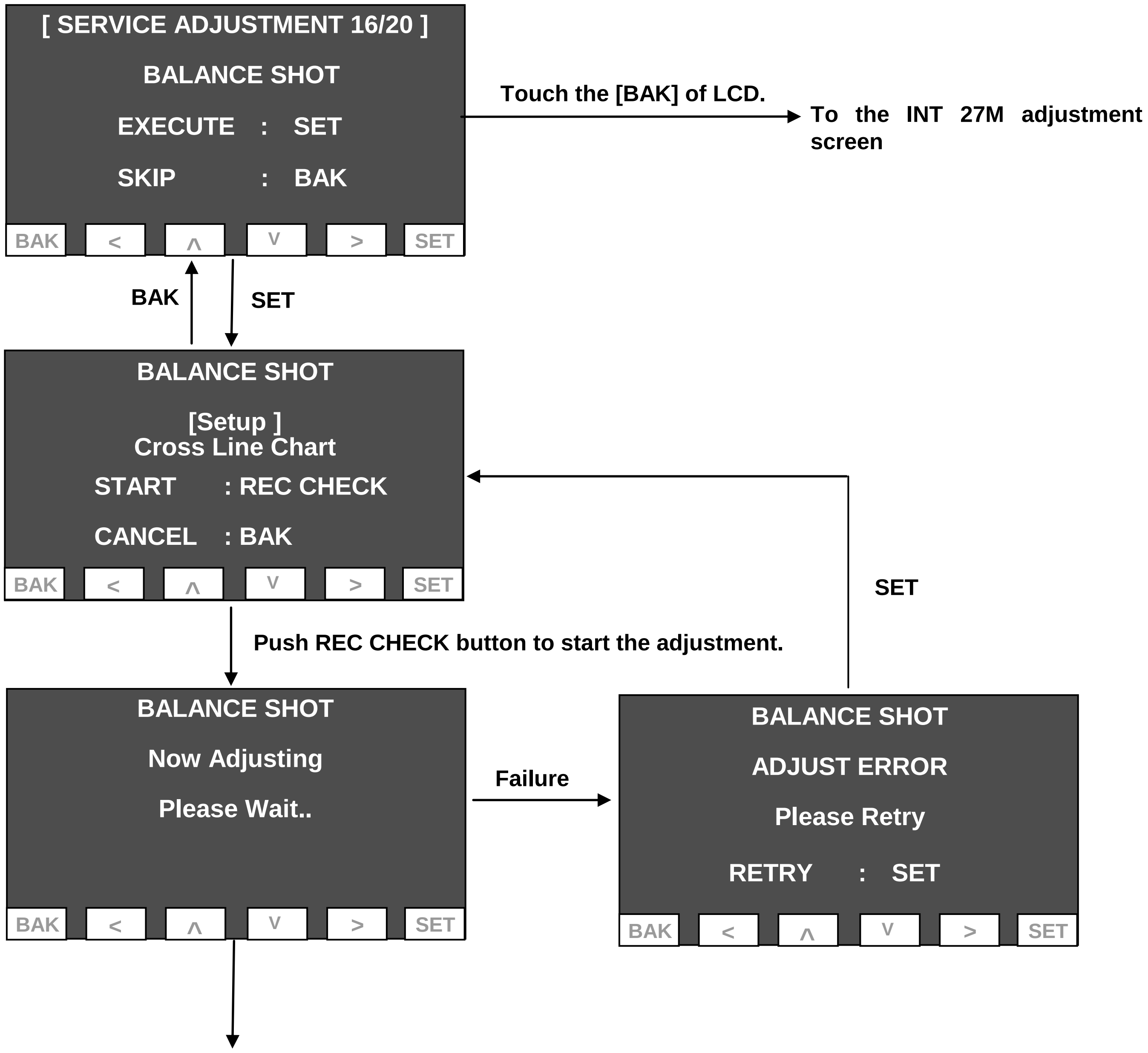
3. Set the Camera-recorder so that the distance to the chart is 100 – 150mm and tilt condition is as shown in the following figure..


Cross Line chart
100- 150mm
Lens front
Horizontal Tilt (ROLL) : with in ±2°
Vertical Tilt (PITCH) : with in ±1°

4. Aim the Camera-Recorder at inspection chart.
   The vertical line should be within 30% from center of the screen.
   The horizontal line is displayed in the both ends of the screen.



< Adjustment >
After completing the preparation setting, press “SET”. Adjustment starts.



[SERVICE ADJUSTMENT 16/20]
BALANCE SHOT
EXECUTE : SET
SKIP : BAK

BALANCE SHOT
[Setup]
Cross Line Chart
START : REC CHECK
CANCEL : BAK

BALANCE SHOT
Now Adjusting
Please Wait..

BALANCE SHOT
ADJUST ERROR
Please Retry
RETRY : SET

BAK
<
^
v
>
SET
Touch the [BAK] of LCD.
To the INT 27M adjustment screen
BAK
SET
Push REC CHECK button to start the adjustment.
SET
Failure

When the adjustment is completed, the display switches to the INT 27M screen.

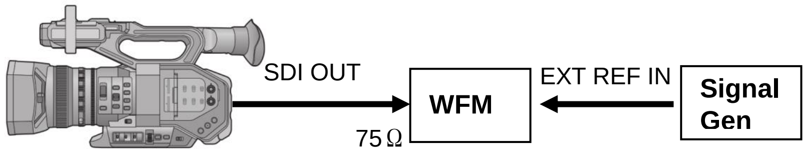
3-5-16. Internal Clock 27MHz adjustment

< Preparation >

1. Shoot the Gray scale chart.
2. Set the WFM monitor to “EXT Reference mode”. And input “EXT REF” to AFM monitor.

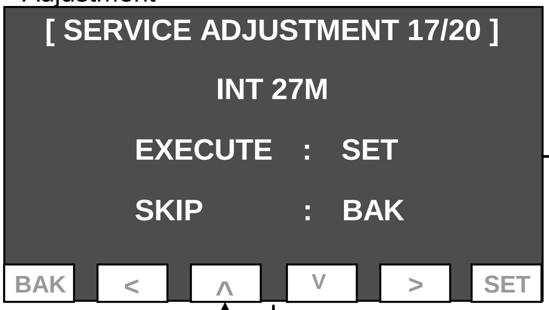
NOTE: When this adjustment is done, recording format is automatically changed to “1920x1080” / ”59.94i”.mode.

< Connection >



WFM Mode
- EXT Reference mode
- WFM mode

< Adjustment >


[SERVICE ADJUSTMENT 17/20]

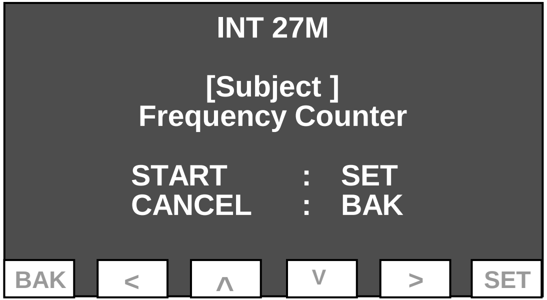
INT 27M

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the VIDEO Y/C screen**

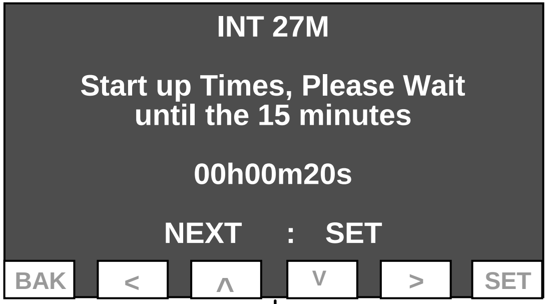
BAK ↑ ↓ **SET**


INT 27M

[Subject]
Frequency Counter

START : SET
CANCEL : BAK

↓ **Touch [SET] to start 15 minutes aiging.**

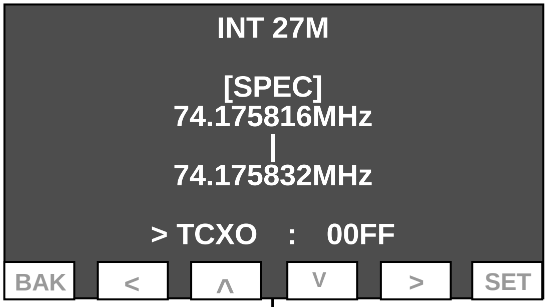

INT 27M

Start up Times, Please Wait
until the 15 minutes

00h00m20s

NEXT : SET

↓ **After waiting for 15 minutes, touch [SET] . This may not appear if the aging is already enough.**


INT 27M

[SPEC]
74.175816MHz
|
74.175832MHz

> TCXO : 00FF

Set the adjustment value with < or > key on the touch panel so that the speed of signal waveform becomes very slowly.

NOTE: The speed of signal waveform does not stop completely. Set the adjustment value at the point that the signal waveform direction changes.

↓ **When the adjustment is completed, touch [SET].**

The display switches to the VIDEO Y/C screen.

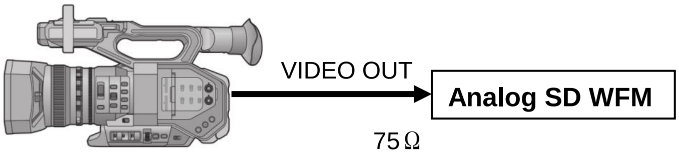
3-5-17. Video Y/C level adjustment

< Preparation >

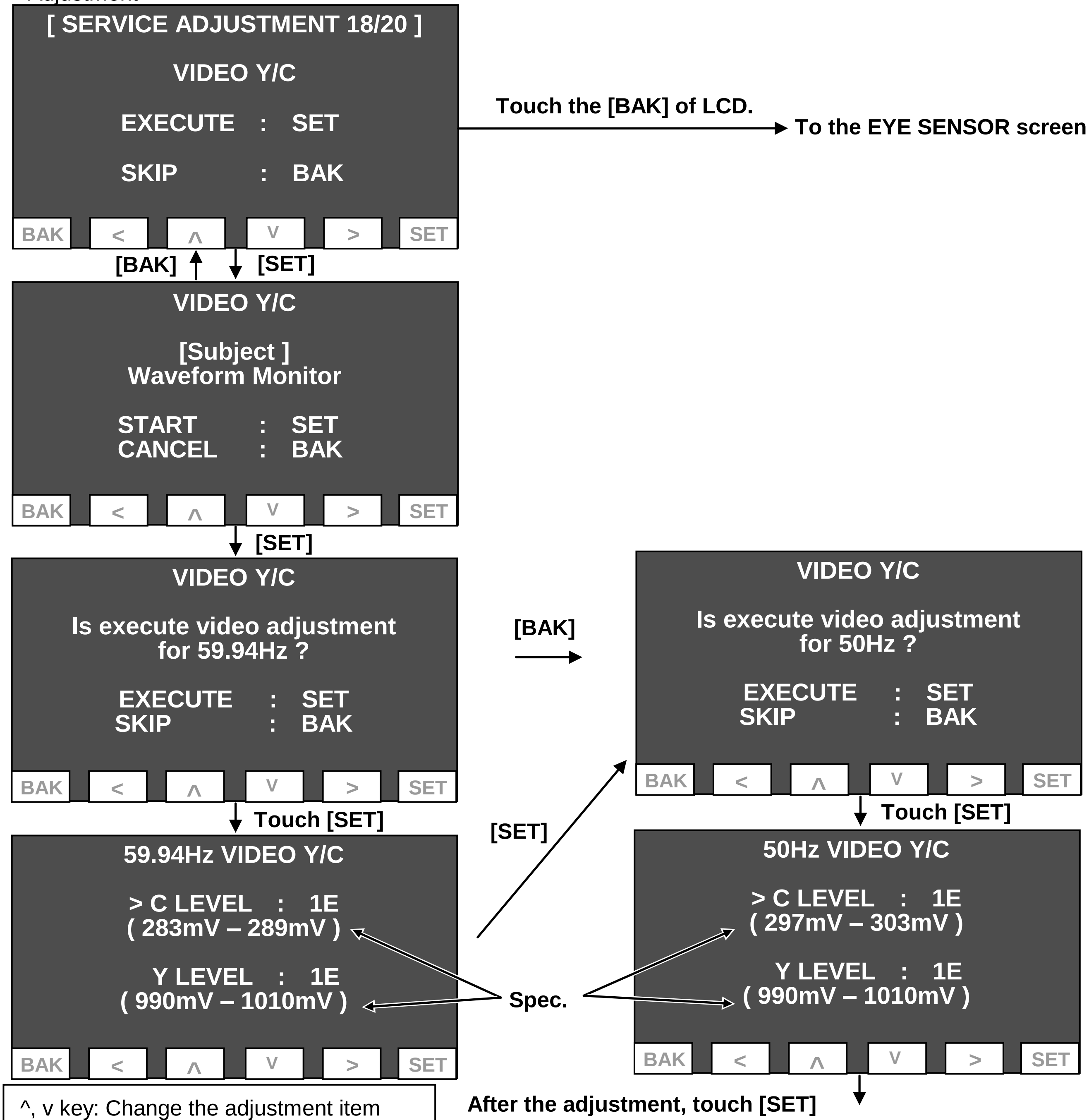
1. Set “OUTPUT SEL” in “OUTPUT SETUP” menu to “SDI+AV”.

NOTE: When this adjustment is done, recording format is automatically changed to “1920x1080” / ”59.94i”.mode.

< Connection >



< Adjustment >



[SERVICE ADJUSTMENT 18/20]

VIDEO Y/C

EXECUTE : SET

SKIP : BAK

VIDEO Y/C

[Subject]
Waveform Monitor

START : SET
CANCEL : BAK

VIDEO Y/C

Is execute video adjustment for 59.94Hz ?

EXECUTE : SET
SKIP : BAK

59.94Hz VIDEO Y/C

> C LEVEL : 1E
(283mV – 289mV)

Y LEVEL : 1E
(990mV – 1010mV)

VIDEO Y/C

Is execute video adjustment for 50Hz ?

EXECUTE : SET
SKIP : BAK

50Hz VIDEO Y/C

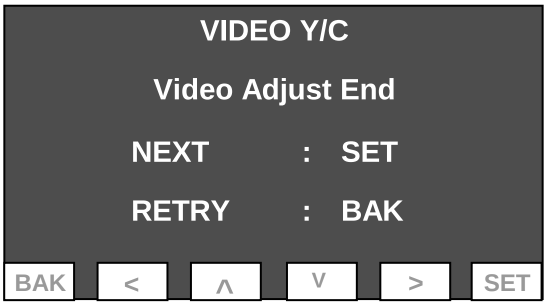
> C LEVEL : 1E
(297mV – 303mV)

Y LEVEL : 1E
(990mV – 1010mV)

After the adjustment, touch [SET]

^, v key: Change the adjustment item
< key: Adjustment value increase
> Key: Adjustment value decrease

Set the adjustment value with < or > key on the touch panel so that the level of Y and Burst(C LEVEL) become within the specification.



VIDEO Y/C

Video Adjust End

NEXT : SET

RETRY : BAK

Touch [BAK]

→ **To the top screen of VIDEO Y/C**

When the adjustment is completed, touch [SET].

↓

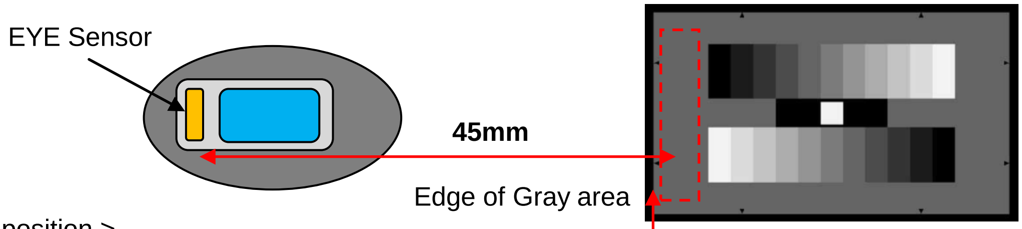
The display switches to the EYE SENSOR screen.

NOTE: When the system frequency (59.94Hz/50Hz) is required,
turn the power to OFF -> ON automatically.

3-5-18. Eye Sensor adjustment

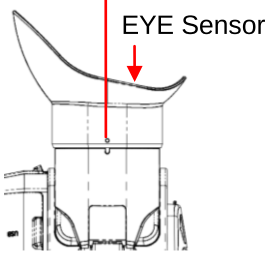
< Preparation >

1. Set the Gray Scale Chart so that the distance from the Eye Sensor is **45mm**.
2. And also set the Gray Scale Chart so that the light of Eye Sensor detects the surrounding Gray area (18% reflectance). Please refer to the following figure.

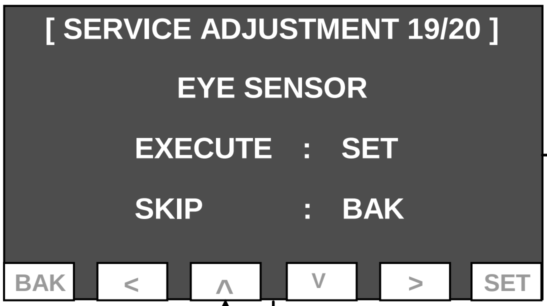


< Chart position >

Set the Gray Scale chart so that the extension of the hollow on EVF hits the edge of Gray area.



< Adjustment >


[SERVICE ADJUSTMENT 19/20]

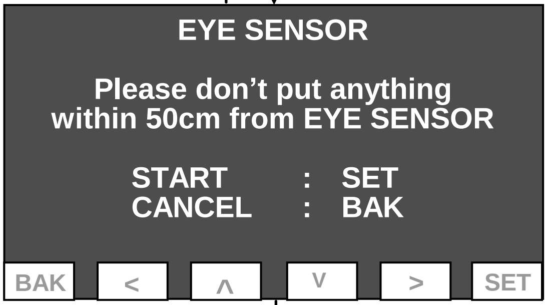
EYE SENSOR

EXECUTE : SET

SKIP : BAK

Touch the [BAK] of LCD. → **To the EYE SENSOR screen**

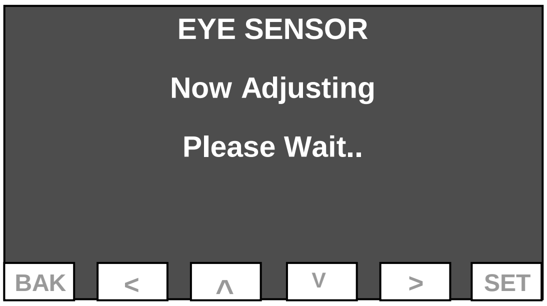
[BAK] **[SET]**


EYE SENSOR

Please don't put anything
within 50cm from EYE SENSOR

START : SET
CANCEL : BAK

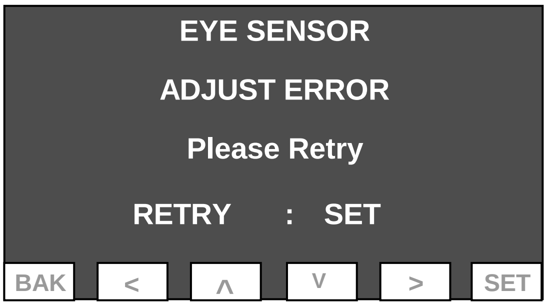
[SET]


EYE SENSOR

Now Adjusting

Please Wait..

Adjustment NG

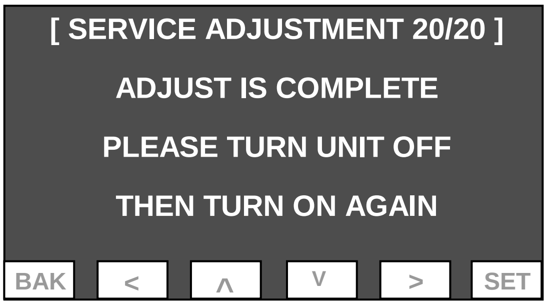

EYE SENSOR

ADJUST ERROR

Please Retry

RETRY : SET

Complete


[SERVICE ADJUSTMENT 20/20]

ADJUST IS COMPLETE

PLEASE TURN UNIT OFF

THEN TURN ON AGAIN

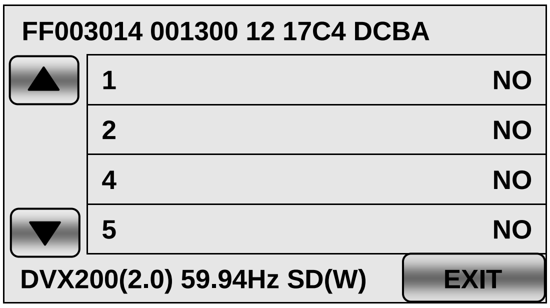
When the adjustment is completed, the adjustment completion screen is displayed.

Use the POWER SW to turn the power OFF and ON.

3-6. Restore the adjustment data

The file data backed up by the function in Item 3-5-3 can be restored to the unit.

Touch the [15] of LCD.



FF003014 001300 12 17C4 DCBA

1 NO

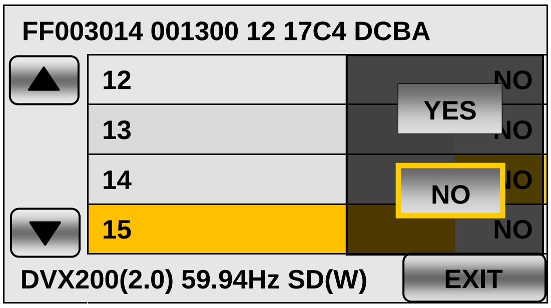
2 NO

4 NO

5 NO

DVX200(2.0) 59.94Hz SD(W)

Top Screen of the service mode menu.



FF003014 001300 12 17C4 DCBA

12 NO

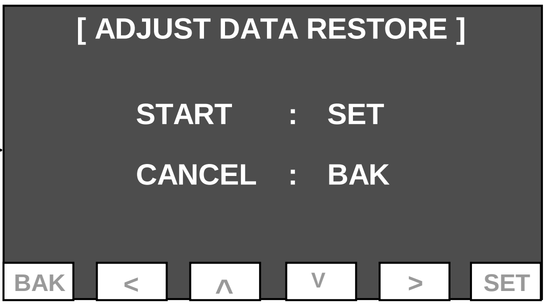
13 NO

14 NO

15 NO

DVX200(2.0) 59.94Hz SD(W)

Touch the [YES] of LCD.



[ADJUST DATA RESTORE]

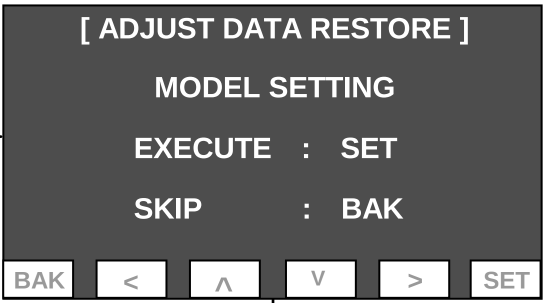
START : SET

CANCEL : BAK

Touch the [BAK] of LCD.

SERVICE MODE is cancelled.

Touch the [SET] of LCD.



[ADJUST DATA RESTORE]

MODEL SETTING

EXECUTE : SET

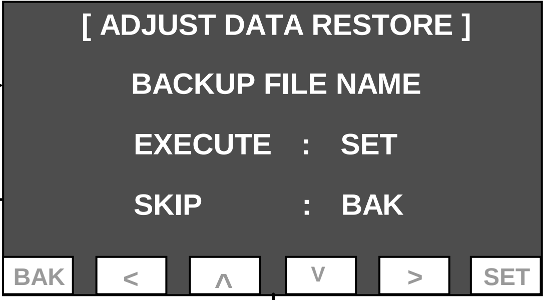
SKIP : BAK

SET

**MODEL SETTING screen is displayed.
Refer to Item “3-5-1. Setting of destination” for the setting procedures.**

BAK

When the setting is completed, the RESTORE MENU screen is displayed.



[ADJUST DATA RESTORE]

BACKUP FILE NAME

EXECUTE : SET

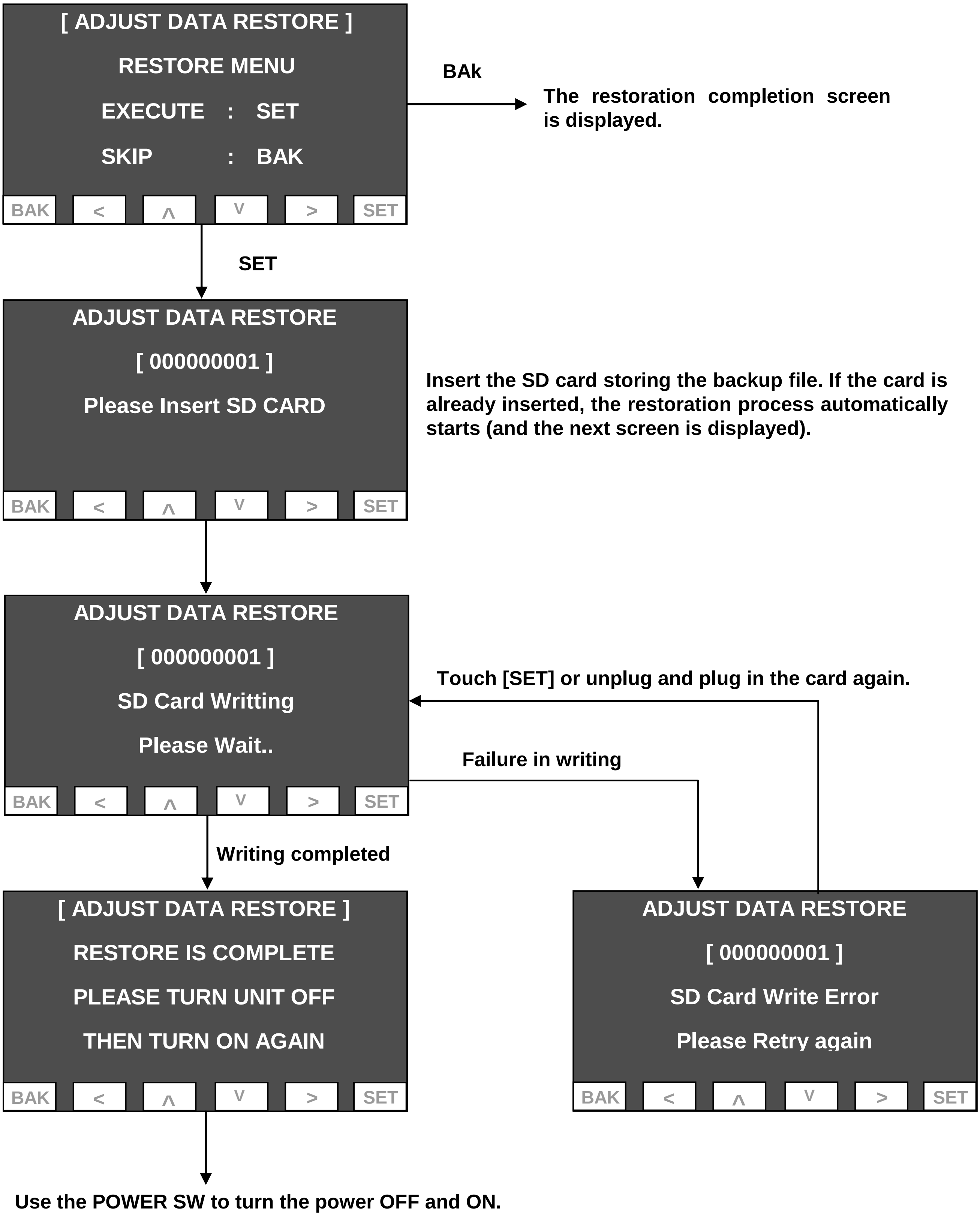
SKIP : BAK

SET

**Setting BACKUP FILE NAME screen is displayed.
Refer to Item “3-5-2. Setting of Backup file name” for the setting procedures.**

BAk

(Continued on the next page)



[ADJUST DATA RESTORE]

RESTORE MENU

EXECUTE : SET

SKIP : BAK

BAk

The restoration completion screen is displayed.

SET

ADJUST DATA RESTORE

[000000001]

Please Insert SD CARD

Insert the SD card storing the backup file. If the card is already inserted, the restoration process automatically starts (and the next screen is displayed).

ADJUST DATA RESTORE

[000000001]

SD Card Writting

Please Wait..

Touch [SET] or unplug and plug in the card again.

Failure in writing

Writing completed

[ADJUST DATA RESTORE]

RESTORE IS COMPLETE

PLEASE TURN UNIT OFF

THEN TURN ON AGAIN

ADJUST DATA RESTORE

[000000001]

SD Card Write Error

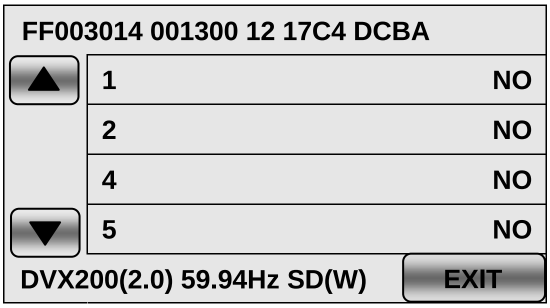
Please Retry again

Use the POWER SW to turn the power OFF and ON.

3-7. Touch Panel adjustment function

Adjustment for the touch panel can be made by this function. (Necessary only after the touch panel replacement)

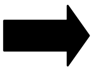
Touch the [16] of LCD.

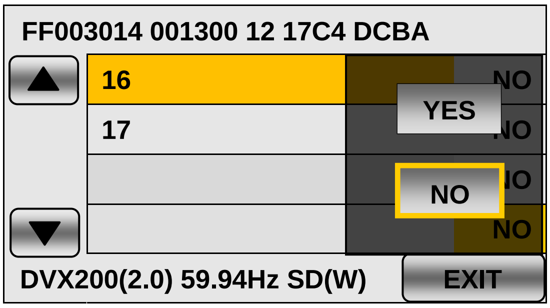

FF003014 001300 12 17C4 DCBA

1	NO
2	NO
4	NO
5	NO

DVX200(2.0) 59.94Hz SD(W)

Top Screen of the service mode menu.




FF003014 001300 12 17C4 DCBA

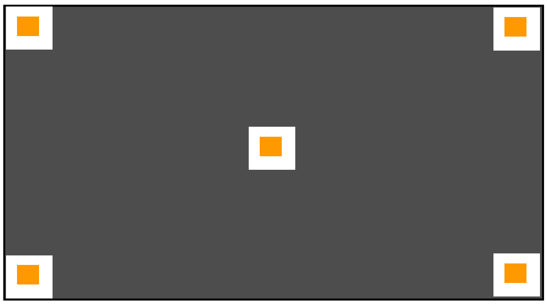
16	NO
17	NO
	NO
	NO

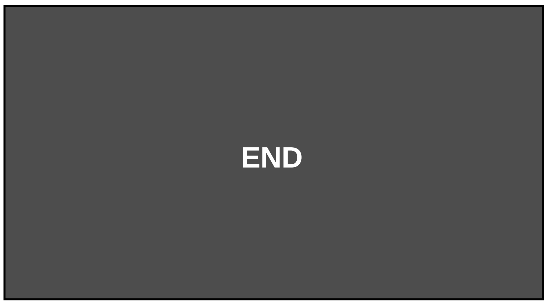
DVX200(2.0) 59.94Hz SD(W)

Touch the [YES] of LCD.

< Adjustment procedure >

1. Touch 5 “🟧” marks at the corners with something like a touch pen.
2. The END screen is displayed.
3. Turn the power OFF using POWER SW.





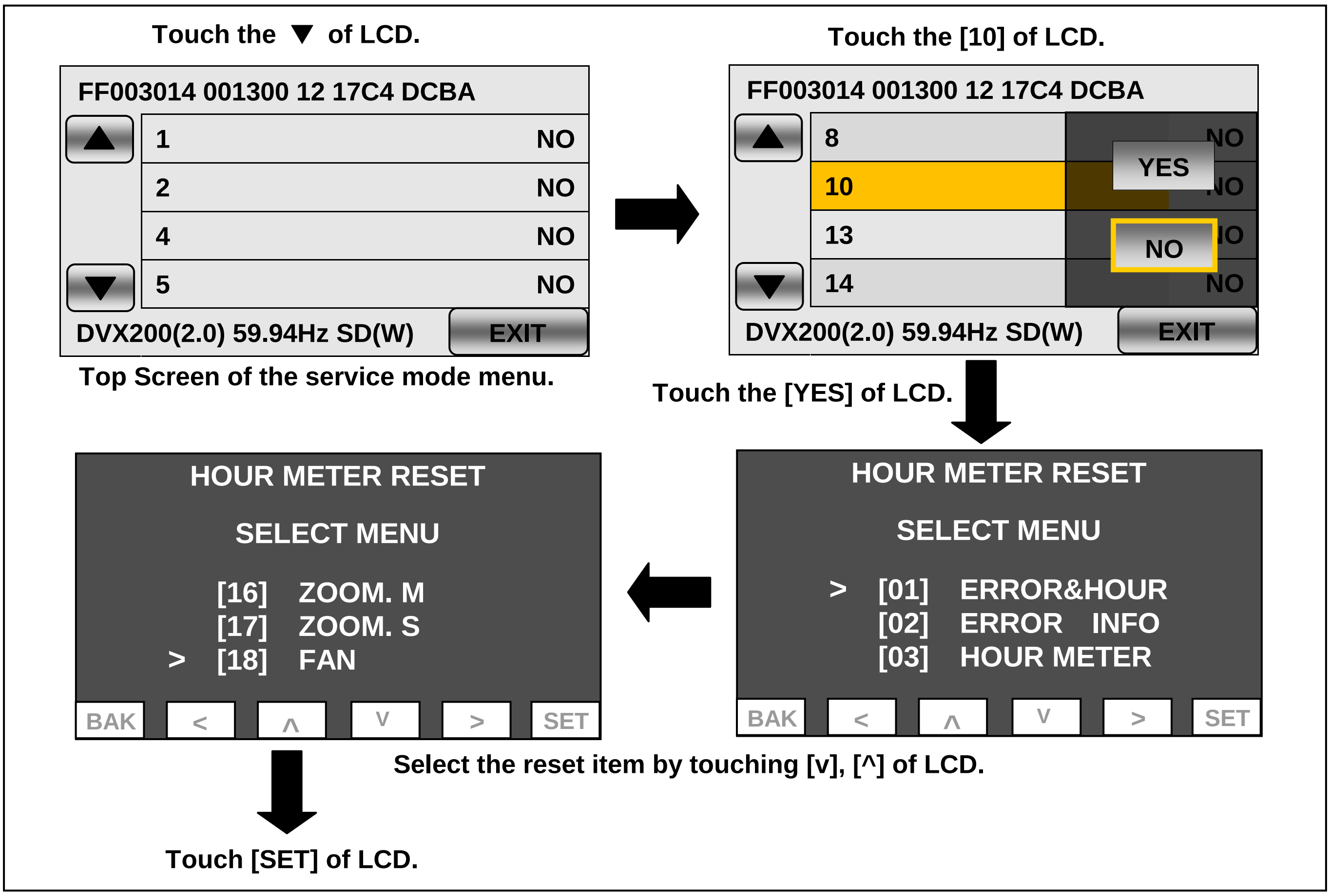
3-8. Hour Meter Reset

On the screen in the service mode "10", Hour Meter or Error information that is displayed in the service mode "4" can be reset.

ERROR&HOUR	**: All Hour Meter and Error Information reset**
ERROR INFO	**: All Error Information clear**
HOUR METER	**: All Hour Meter reset**
PWR	**: Total power-on time reset**
EE	**: Total EE-state (Recording mode) time**
SUB CAM	**: Not used**
REC SD1	**: Total movie recording time (SD Slot1)**
REC SD2	**: Total movie recording time (SD Slot2)**
INT SD1	**: Total interval recording time (SD Slot1)**
INT SD2	**: Total interval recording time (SD Slot2)**
PICT SD1	**: Total number of recorded still pictures (SD Slot1)**
PICT SD2	**: Total number of recorded still pictures (SD Slot1)**
LAST PTH	**: Not used**
SUM PTH	**: Not used**

ZOOM	**: Total number of ZOOM Motor operation**
ZOOM. M	**: The total number of times of Grip Zoom lever operation**
ZOOM. S	**: The total number of times of Sub Zoom lever operation**
FAN	**: Operation time of FAN**
P.ON	**: The number of times of Power SW operation**
ND. F1	**: The number of times of ND filter(1/4) select**
ND. F2	**: The number of times of ND filter(1/16) select**
IR. F	**: The number of times of IR filter select**
LCD	**: Operation time of LCD**
EVF	**: Operation time of EVF**

Touch "10" on the service mode menu screen.
YES/NO selection screen is displayed, then touch "YES" to display the HOUR METER RESET screen.



Touch the ▼ of LCD.

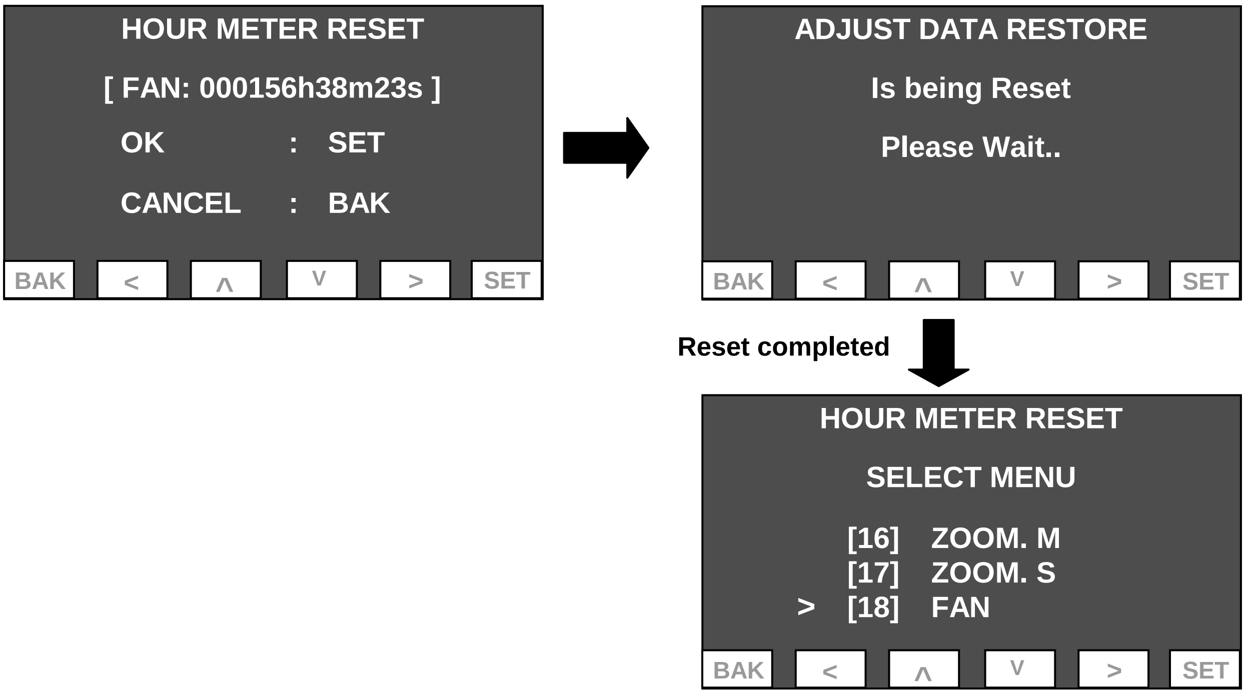
Top Screen of the service mode menu.

Touch the [10] of LCD.

Touch the [YES] of LCD.

Select the reset item by touching [v], [^] of LCD.

Touch [SET] of LCD.



Touch [SET] of LCD.

HOUR METER RESET

[FAN: 000156h38m23s]

OK : SET

CANCEL : BAK

ADJUST DATA RESTORE

Is being Reset

Please Wait..

Reset completed

HOUR METER RESET

SELECT MENU

[16] ZOOM. M
[17] ZOOM. S
> [18] FAN

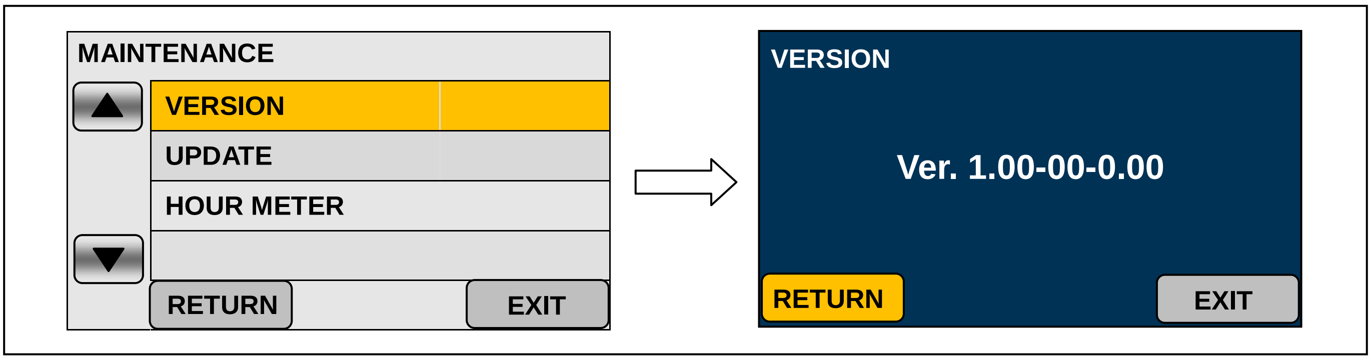
4. Firmware update procedure

The FLASH ROM (NAND) software can be updated by SD memory card.

4-1. Version display method

The version of system in this camera recorder is displayed in MAINTENANCE menu screen.

1. Turn the power on.
2. Press **MENU** button to display the setting menu.
3. Select the MAINTENANCE menu and touch **“MAINTENANCE”** to open the MAINTENANCE menu.
4. Select the item **“VERSION”** (Touch **“VERSION”**) to display the version of system in this camera recorder.



4-2. Update with the SD memory card

CAUTION: Before Updating Software

- **Do not power down or pull card while upgrading.** If the program quits during loading, the data will be erased or part writing condition and the restart is not made. However software cannot be updated, please contact Panasonic Service Engineering.

< External Power >

The update cannot be executed while the camera is operating on battery power. Please use the AC adapter.

4-2-1. Copy the firmware update file into an SD memory card

< Preparation for SD memory card >

1. Buffer memory size in SD memory card more than file size of update file (hdc file) is needed, and use an SD Memory Card which has already been formatted for this unit.

NOTE: Be sure to format SD memory card on this unit.

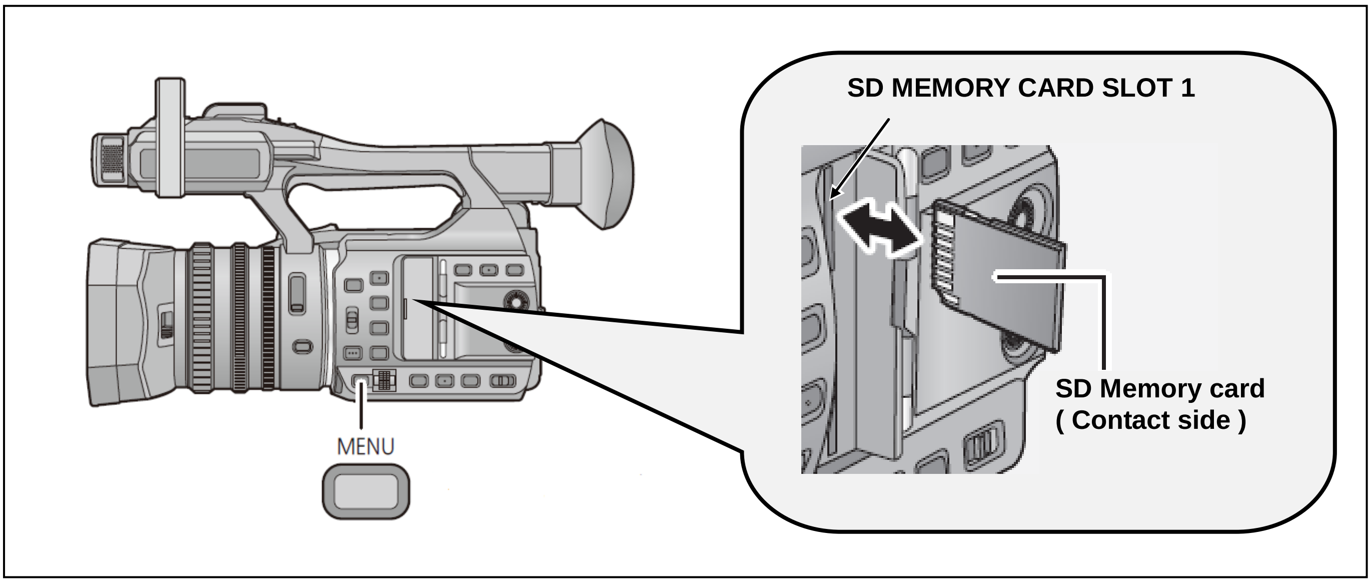
< Copy the update file >

1. Download update file data **“VSI*****.zip”** for the update from **“Support Desk”** web site.
2. Copy the file **“VSI*****.zip”** to hard disk of your PC and extract the file.
3. Insert the formatted SD memory card into the PC’s card slot. Then copy the extracted update file **“UPDATE.HDC”** to the root directory(*1) of the card. For example, if the SD Card folder is on D drive, the file’s location will be described as D ∖ UPDATE.HDC.

(*1): Root directory = top-level directory of the file structure.

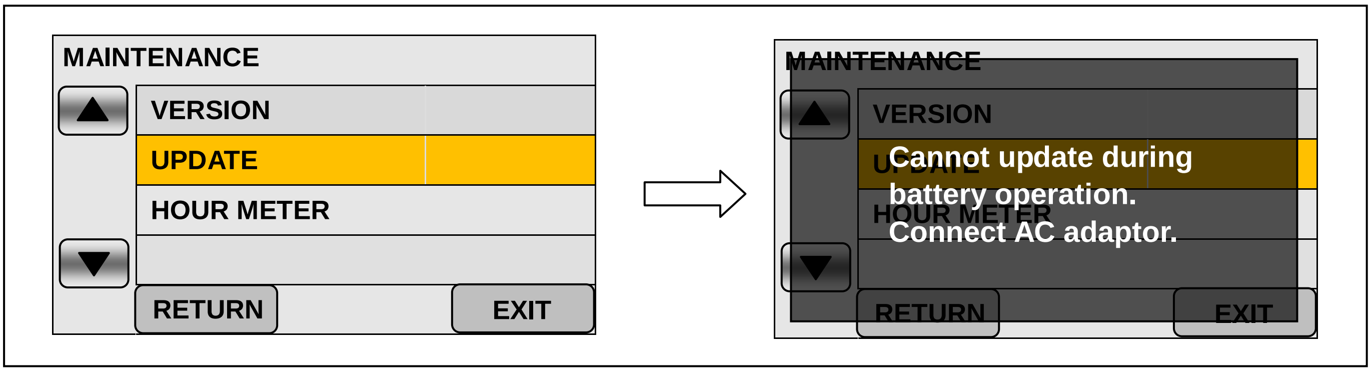
4-2-2. Updated procedure

1. Turn the power on. Set the **MODE SW** to **RECORDING** side.
2. Insert the SD memory card into the SD memory card slot 1.
3. Press the **MENU** button to display the setting menu.



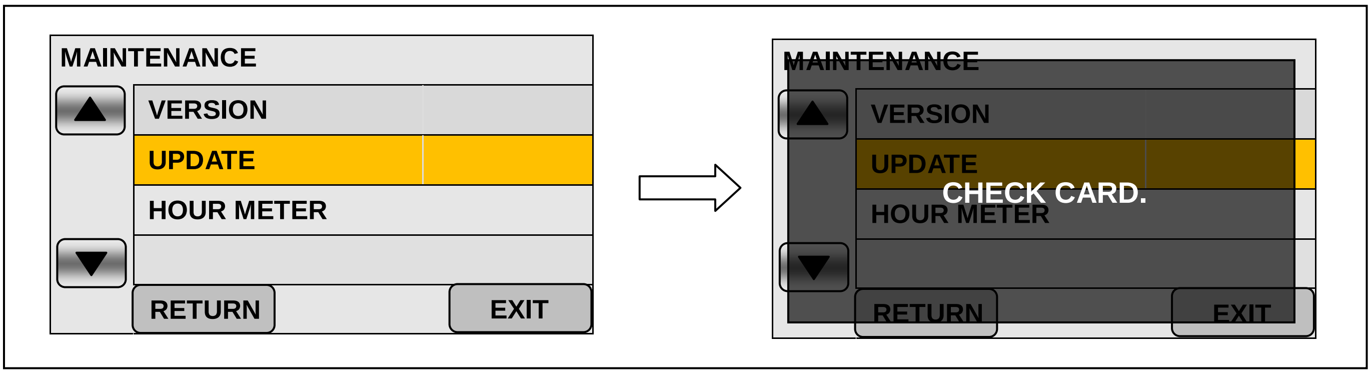
4. Select the item **“UPDATE”** on the MAINTENANCE menu. (Touch **“UPDATE”**.)

NOTE: The update cannot be executed when the camera is operating on battery power. The following message is displayed. Please connect the AC adapter.



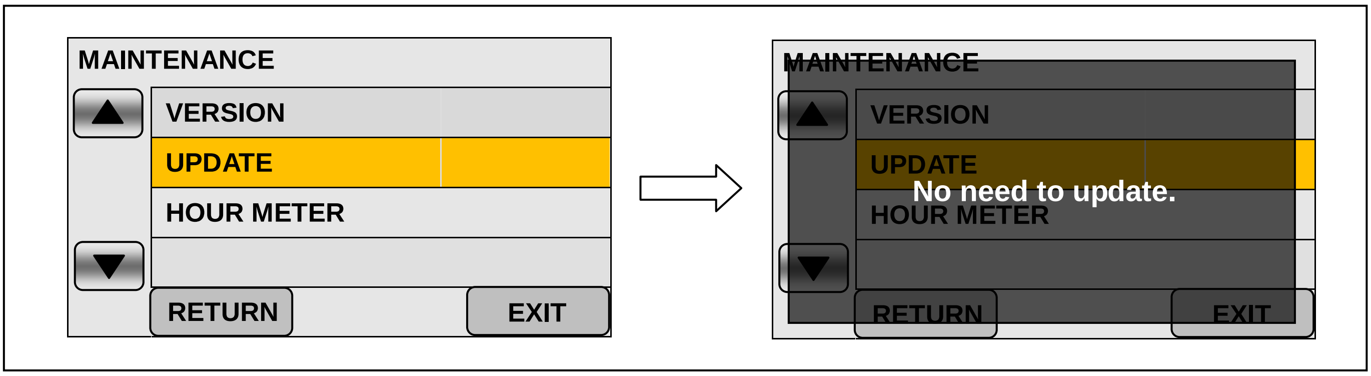
Cannot update during battery operation. Connect AC adaptor.

NOTE: When the update file is not recognized on SD memory card etc., the message **“CHECK CARD.”** is displayed as follows. Please confirm whether the update file is correctly written on the SD memory card.



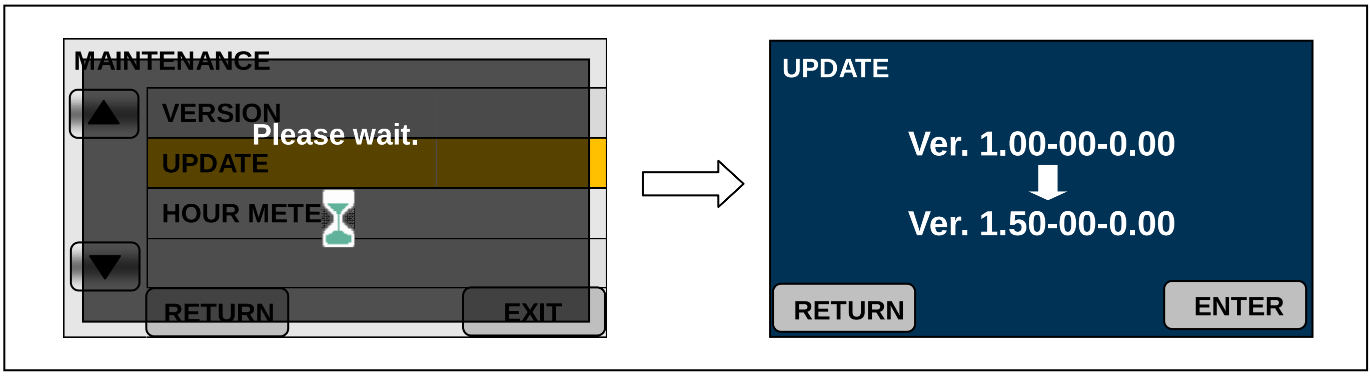
CHECK CARD.

NOTE: When the version is the same or when the version of the update file on the SD card is lower, the message **"No need to update."** is displayed.



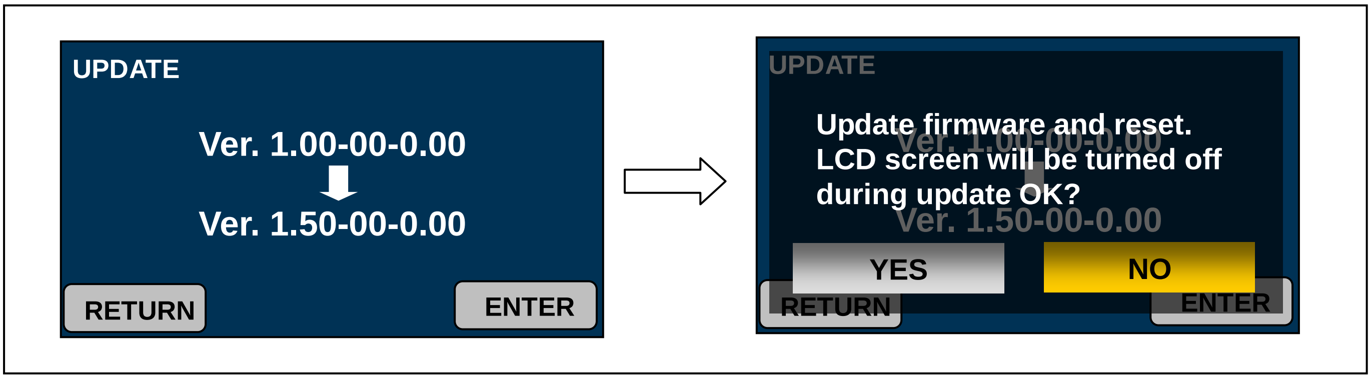
No need to update.

5. It takes a few seconds to check the file. While checking it, the message **"Please wait."** is displayed. If the update can be executed, the versions of the camera recorder and the update file on the SD card are displayed.



Please wait.

6. Select the **"ENTER"** button. (Touch the **"ENTER"** button.)
7. The update confirmation screen is displayed. When **"YES"** is selected, the update process will start. (Touch the **"YES"** button.) When **"NO"** is selected, the screen will return to the OTHER FUNCTION menu screen.

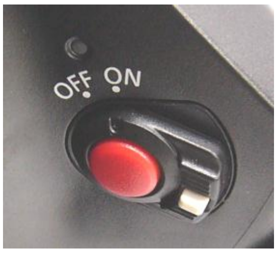


Update firmware and reset.
LCD screen will be turned off
during update OK?

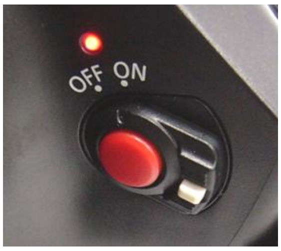
8. The LCD screen darkens when shifting to the update processing, and the **Status indicator** goes OFF. During updating software, **Status indicator** is OFF.

The message does not display on the screen.

During updating software,
Status indicator is OFF.

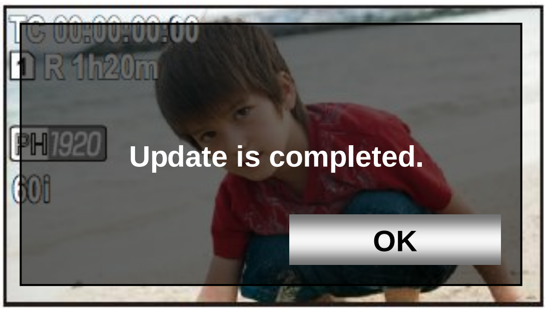


In updating succeed,
Status indicator lights.



◆ Software update takes **approx. 1 to 2min**. **Do not power down while updating.**

9. When the update is completed, the power automatically turns OFF / ON and the message **"Update is completed."** is displayed. After the power is ON again, **Status indicator is ON.**
10. Select the **"OK"** button. (Touch the **"OK"** button.) The normal "Recording" mode screen is displayed.



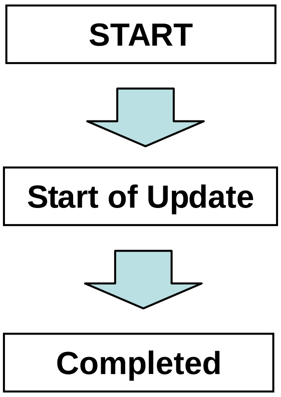
Update is completed.

11. Confirm that the version number is renewed for your confirmation update was correctly done follow the item **"5-1. Version display method"**.

< How to recover from irregular situations while updating >

Solutions are introduced against both Card Plug-Out and Power Interruption troubles to execute the update again.

Process	Card Plug-Out	Power Interruption
Data Readout from SD Card	Error Message (CHECK CARD) Restart from selection of “UPDATE”	The camera recorder starts up normally. Restart from selection of “UPDATE”
Updating (Update of Flash ROM Data)	Plug-Out is ignored. Update is continued. (because the update file data is already transferred to the camera recorder)	At the power-on, the camera recorder starts up in UPDATE mode. Update is continued.



5. Operation after major part exchanged

5-1. Operation List

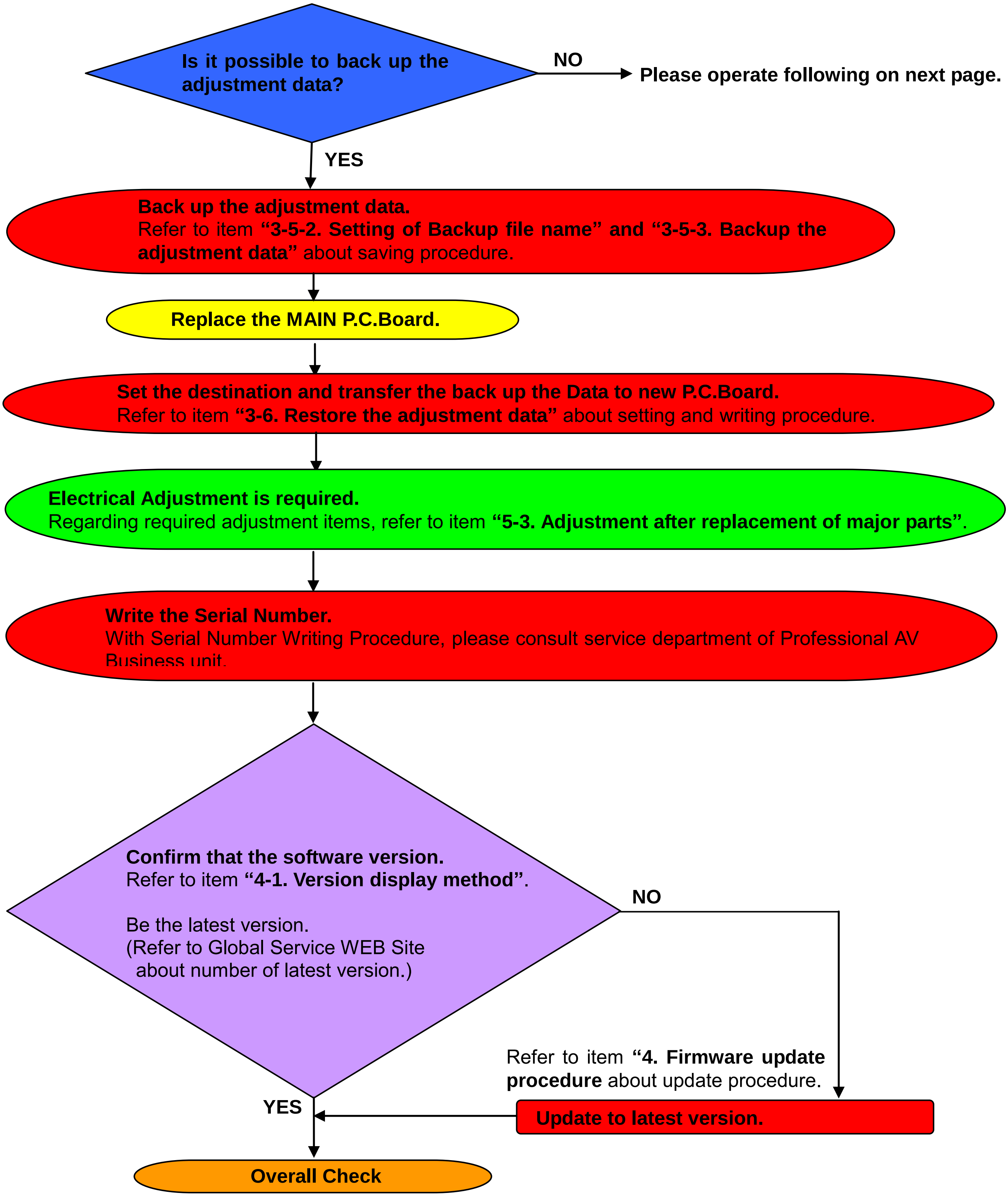
These are items that must be done when the major part has been replaced.

X: Operation required

	Replacement Parts	Adj.	Version conf.	Data Backup	Remark
MAIN FRAME U	MAIN P.C.B.	X	X	X	
	LENS U (MOS SENSOR P.C.B.)	X			
	SD HOLDER P.C.B.				
	XLR REAR P.C.B.				
	FAN				Hour Meter Reset
HANDLE U	EVF U	X			Hour Meter Reset
	EVF P.C.B				*Included in EVF U.
	EYE SENSOR P.C.B	X			*Included in EVF U.
	MIC P.C.B				
	LCD U	X			Hour Meter Reset
	MONITOR P.C.B				*Included in LCD U.
	LCD CASE (B) U (TOUCH PANEL)	X			*Included in LCD U.
	HANDLE OP P.C.B				Check of button/SW
	XLR FRONT P.C.B				
	SUB SS ZOOM P.C.B				Check of button/SW Hour Meter Reset
L JACK U	JACK BNC P.C.B				
	JACK A WIRED P.C.B				
	JACK DC P.C.B				
SIDE CASE R U	OP TOGGLE P.C.B	X			Check of button/SW
	OP AUDIO P.C.B	X			Check of button/SW Date & Time setting
	OP MENU P.C.B	X			Check of button/SW
	OP USER P.C.B	X			Check of button/SW
	OP CAM P.C.B	X			Check of button/SW
REAR CASE U	BATT CATCHER P.C.B.				
GRIP U	SS JYRO P.C.B.	X			Balance Shot adjustment and Camera adjustment Hour Meter Reset
	ZOOM LEVER SERVICE U (GRIP ZOOM P.C.B.)	X			Balance Shot and Zoom lever adjustment Hour Meter Reset

5-2. Operation flow chart after replacement of major parts

5-2-1. MAIN P.C.Board



Is it possible to back up the adjustment data?

Please operate following on next page.

Back up the adjustment data.
Refer to item **"3-5-2. Setting of Backup file name" and "3-5-3. Backup the adjustment data"** about saving procedure.

Replace the MAIN P.C.Board.

Set the destination and transfer the back up the Data to new P.C.Board.
Refer to item **"3-6. Restore the adjustment data"** about setting and writing procedure.

Electrical Adjustment is required.
Regarding required adjustment items, refer to item **"5-3. Adjustment after replacement of major parts"**.

Write the Serial Number.
With Serial Number Writing Procedure, please consult service department of Professional AV Business unit.

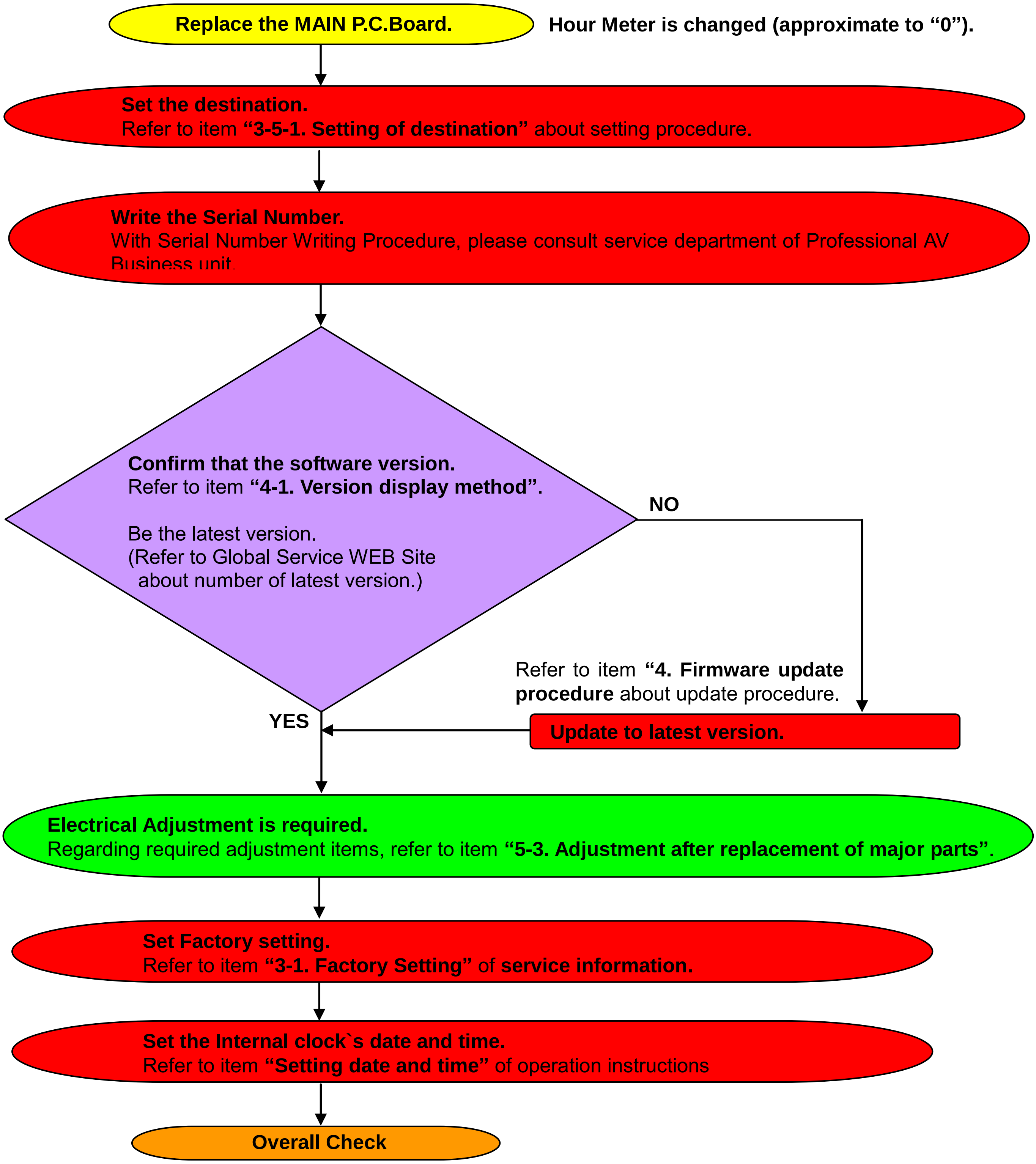
Confirm that the software version.
Refer to item **"4-1. Version display method"**.

Be the latest version.
(Refer to Global Service WEB Site
about number of latest version.)

Refer to item **"4. Firmware update procedure** about update procedure.

Update to latest version.

Overall Check



Replace the MAIN P.C.Board.

Hour Meter is changed (approximate to "0").

Set the destination.
Refer to item **"3-5-1. Setting of destination"** about setting procedure.

Write the Serial Number.
With Serial Number Writing Procedure, please consult service department of Professional AV Business unit.

Confirm that the software version.
Refer to item **"4-1. Version display method"**.

Be the latest version.
(Refer to Global Service WEB Site about number of latest version.)

Refer to item **"4. Firmware update procedure** about update procedure.

Update to latest version.

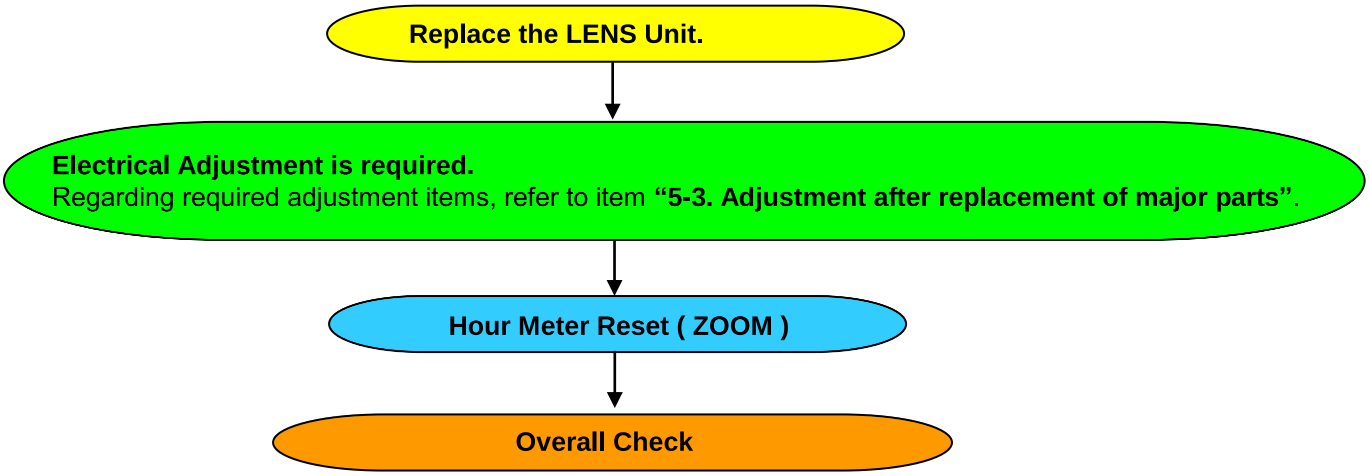
Electrical Adjustment is required.
Regarding required adjustment items, refer to item **"5-3. Adjustment after replacement of major parts"**.

Set Factory setting.
Refer to item **"3-1. Factory Setting"** of **service information.**

Set the Internal clock`s date and time.
Refer to item **"Setting date and time"** of operation instructions

Overall Check

5-2-2. LENS Unit



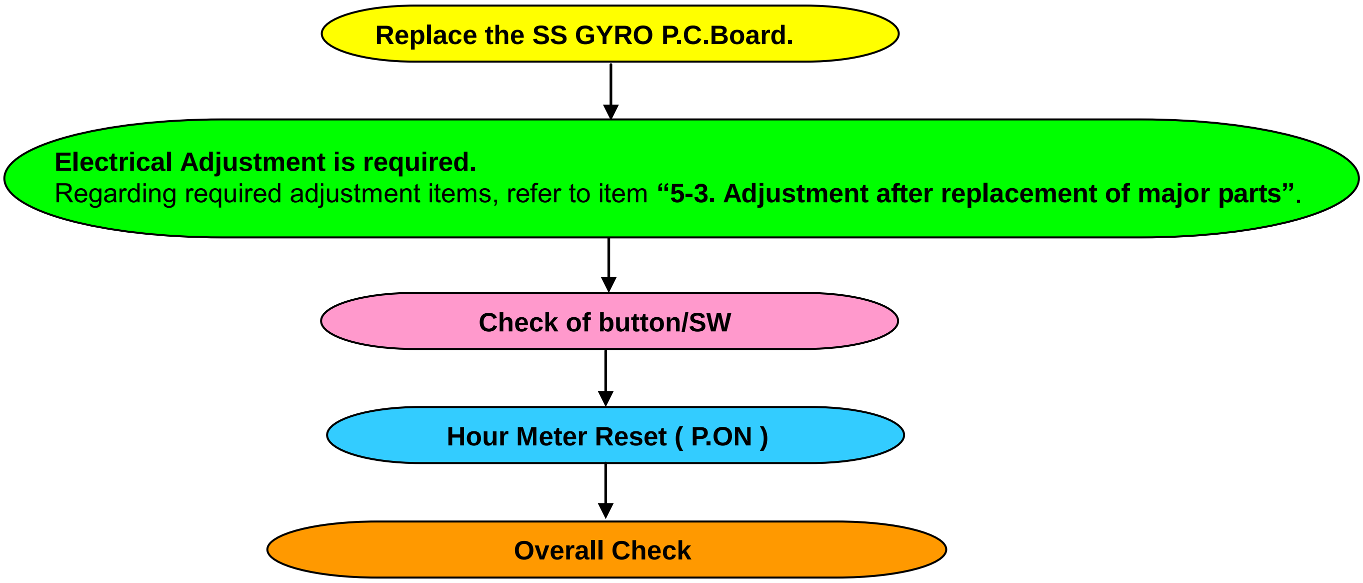
Replace the LENS Unit.

Electrical Adjustment is required.
Regarding required adjustment items, refer to item **“5-3. Adjustment after replacement of major parts”**.

Hour Meter Reset (ZOOM)

Overall Check

5-2-3. SS GYRO P.C.Board



Replace the SS GYRO P.C.Board.

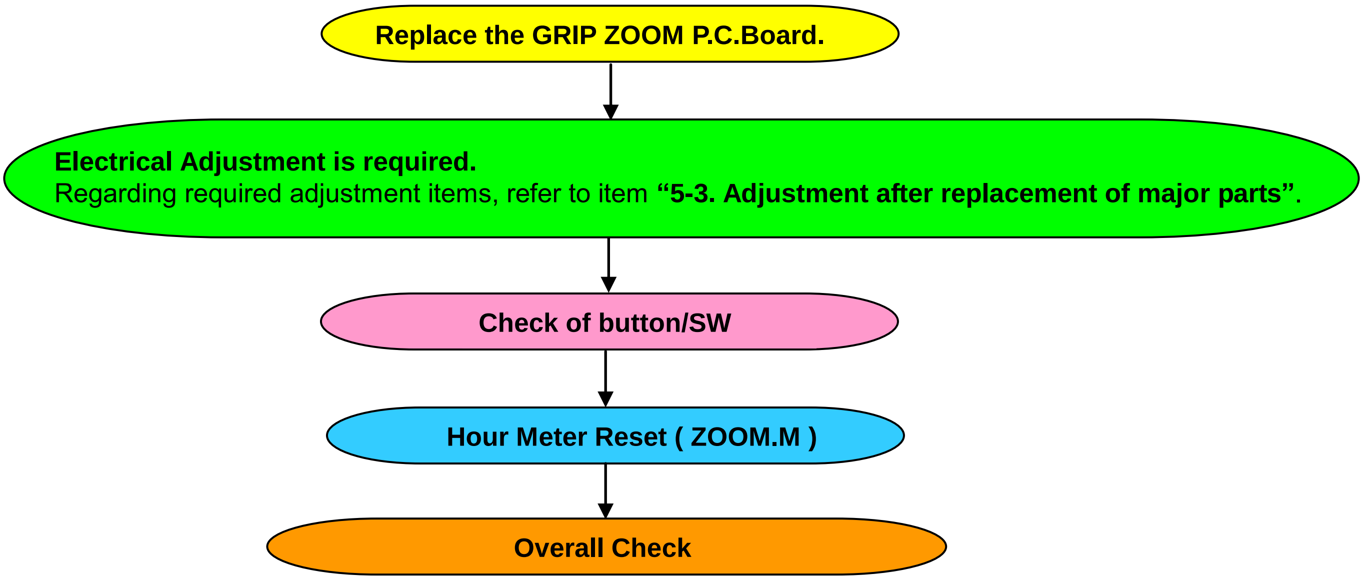
Electrical Adjustment is required.
Regarding required adjustment items, refer to item **“5-3. Adjustment after replacement of major parts”**.

Check of button/SW

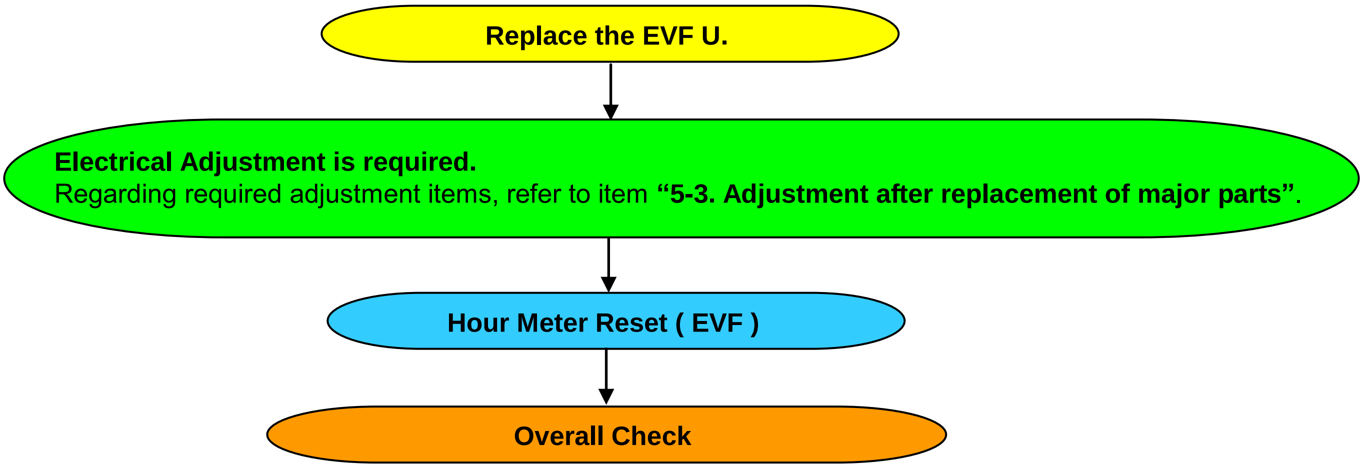
Hour Meter Reset (P.ON)

Overall Check

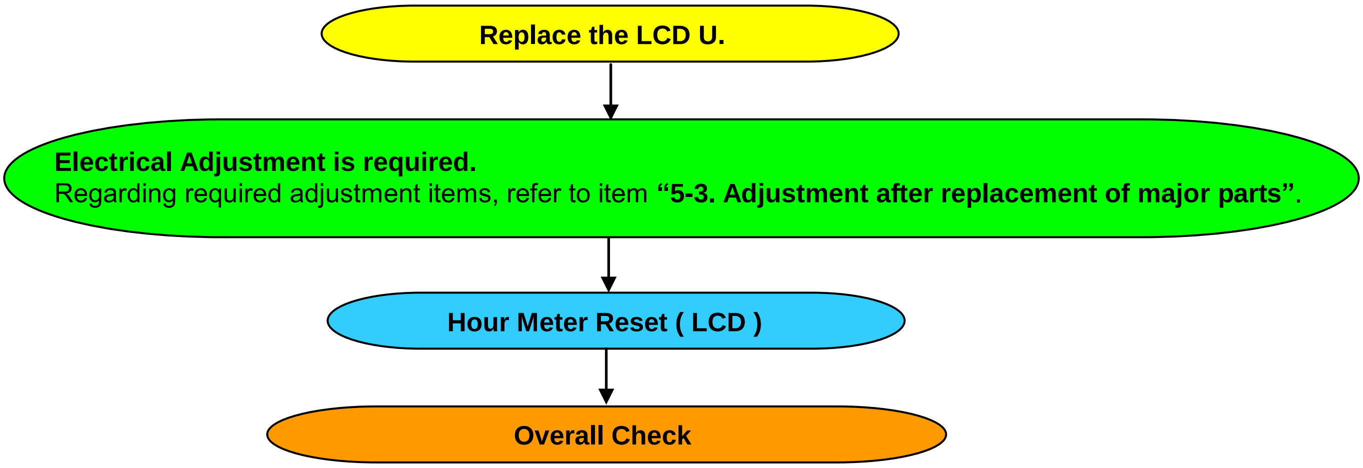
5-2-4. GRIP ZOOM P.C.Board


Replace the GRIP ZOOM P.C.Board.
Electrical Adjustment is required.
Regarding required adjustment items, refer to item "5-3. Adjustment after replacement of major parts".
Check of button/SW
Hour Meter Reset (ZOOM.M)
Overall Check

5-2-5. EVF Unit


Replace the EVF U.
Electrical Adjustment is required.
Regarding required adjustment items, refer to item "5-3. Adjustment after replacement of major parts".
Hour Meter Reset (EVF)
Overall Check

5-2-6. LCD Unit


Replace the LCD U.
Electrical Adjustment is required.
Regarding required adjustment items, refer to item "5-3. Adjustment after replacement of major parts".
Hour Meter Reset (LCD)
Overall Check

5-2-7. HANDLE OP P.C.Board

Replace the HANDLE OP P.C.Board.

Check of button/SW

Overall Check

5-2-8. SUB SS ZOOM P.C.Board

Replace the SUB SS ZOOM P.C.Board.

Check of button/SW

Hour Meter Reset (ZOOM.S)

Overall Check

5-2-9. OP AUDIO P.C.Board

Replace the OP AUDIO P.C.Board.

Set the Internal clock`s date and time.
Refer to item **“Setting date and time”** of operation instructions

Check of button/SW

Overall Check

5-2-10. OP TOGGLE P.C.B / OP MENU P.C.B / OP USER P.C.B / OP CAM P.C.B

Replace the each parts.

Check of button/SW

Overall Check

5-3. Adjustment after replacement of major parts

When the following parts are exchanged showing in the table, the adjustment and confirmation are required follow the items shown by mark **“X”** in the table.
The adjustment procedure has been described to item **“3-5. Adjustment function for service”** of service information (SECTION 1).

ADJISTMENT ITEM	**PARTS NAME**							
	***MAIN P.C.B.**		**CAMERA LENS U**	**LCD U**	**EVF U**	**GRIP U**		**SUB SS Zoom**
	Data backup OK	**No Data backup**				**GRIP ZOOM P.C.B.**	**SS GYRO P.C.B**	
Model / Destination setting	X	X						
Setting of Backup File name	X							
Restore the adjustment data	X							
Zoom lever adjustment		X				X		
Camera adjustment (IRIS,GYRO,OIS)		X	X				X	
Tracking adjustment		X	X					
Finite Focus adjustment		X	X					
White balance adjustment (3100K)		X	X					
White balance adjustment (5600K)		X	X					
White Shading adjustment		X	X					
Black Blemish Compensation		X	X					
Balance Shot adjustment**	X	X	X			X	X	
Internal Clock 27MHz adjustment	X	X						
Video Y/C level adjustment	X	X						
Eye Sensor adjustment		X			X			
Factory Setting	X	X						
Touch Panel adjustment				X				
Hour Meter Reset			X	X	X	X	X	X

X: Adjustment / Confirmation Required

***** The method of data backup has been described to the item **“3-5-2. Setting of Backup file name”** and **“3-5-3. Backup the adjustment data”** of service information (SECTION 1).

** Balance Shot adjustment is required, when the attachment position of the lens is changed.
When the main body is disassembled, please be sure to perform the Balance Shot adjustment.

6. Maintenance

6-1. Maintenance Schedule

No.	Part Name	Part No.	Pcs	Replacement
1	Zoom Motor Unit	L6DBYYYC0001	1	Every 50,000 number of times (ZOOM) * Please refer to the following procedures.
2	Zoom Lever Unit	SYQ0549	1	Every 100,000 number of times (ZOOM.M) * Please refer to the following procedures.

The maintenance execution time shown in the above is recommendation for standard maintenance execution. This is not life of various parts. The life is influenced by temperature, humidity, dust, etc..

6-2. Hour Meter Confirmation / Reset

< Hour Meter Confirmation >

Hour Meter information can be confirmed in Service Menu No.4. Please refer to item **“3-3. Hour Meter & Error code indication”** in Service Information.

And also the number of operation times of Zoom Lever and Zoom Motor can be confirmed in the normal menu.
[MENU] > [MAINTENANCE] > [HOUR METER]

< Hour Meter Reset >

After replacing Zoom Lever unit or Zoom Motor unit, set the operation number of times to 0 times.
Please refer to item **“3-8. Hour Meter Reset”** in Service Information.

6-3. Replacement procedure of Maintenance parts

< Zoom Lever unit >

The removal procedure has been described to the item **“21. Removal of ZOOM U”** of disassembly procedure (SECTION 2).

< Zoom Motor unit >

1. Remove the Camera Lens U. Refer to the item **“8. Removal of Camera Lens U”** of disassembly procedure.
2. Unscrew the 2 screws (A) as shown in figure 6-1 and remove the Zoom Motor Unit from the Zoom gear.
3. Unsolder the solder two places as shown figure 6-1, and remove the Zoom Motor Unit.

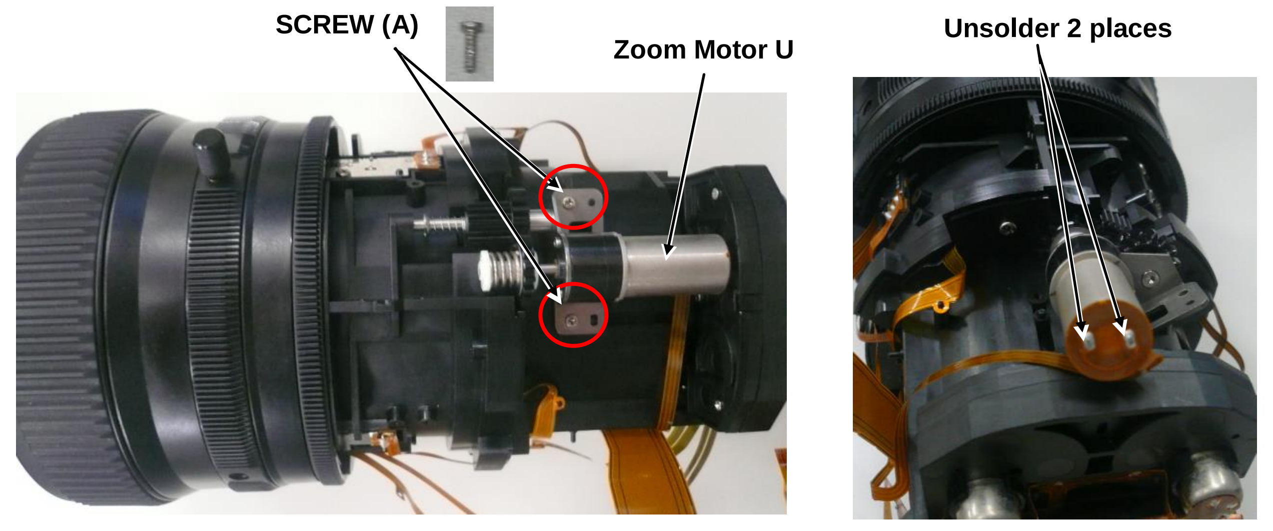
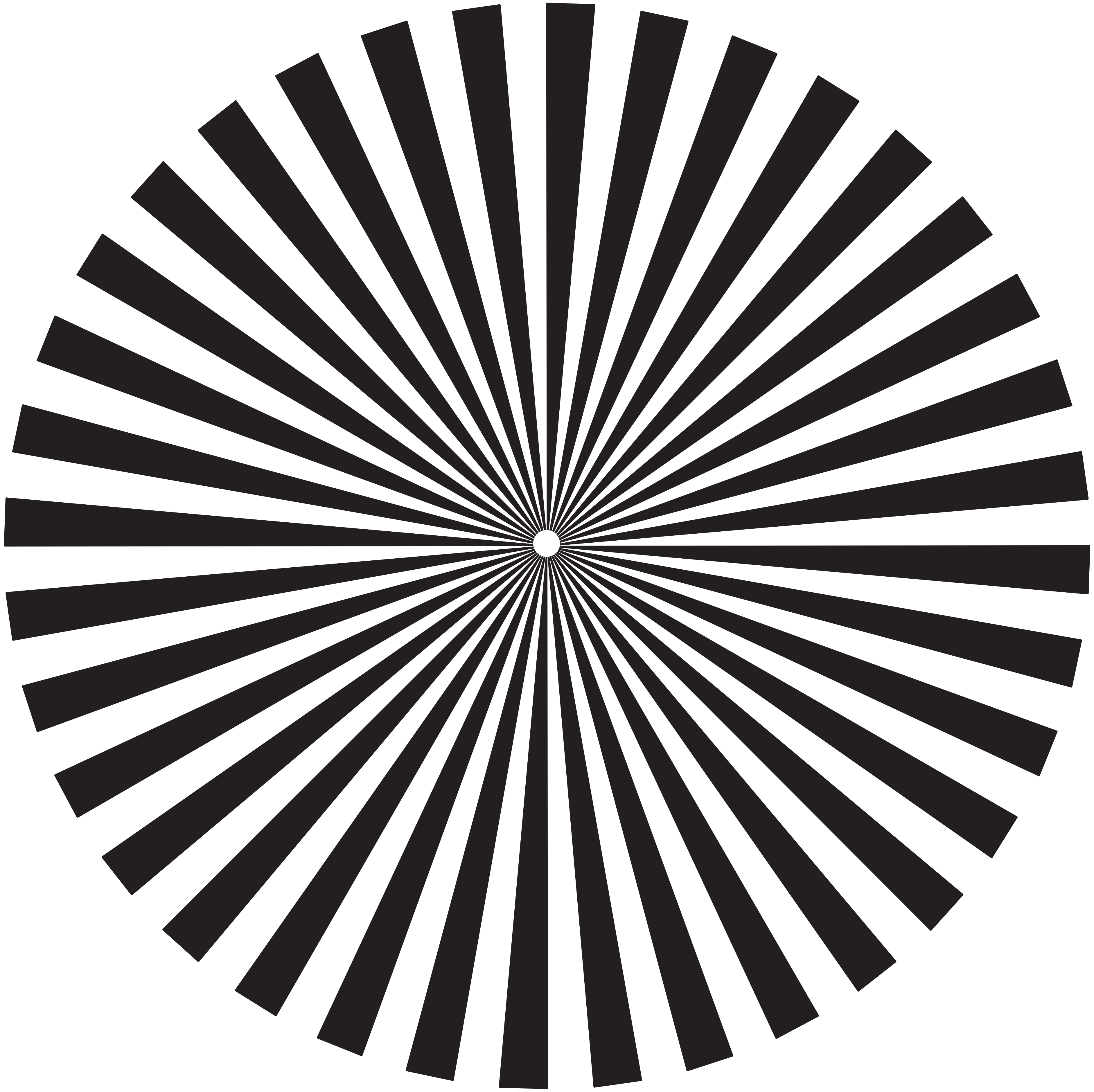


Figure 6-1



SECTION 2

DISASSEMBLY PROCEDURES

Model No. : AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC

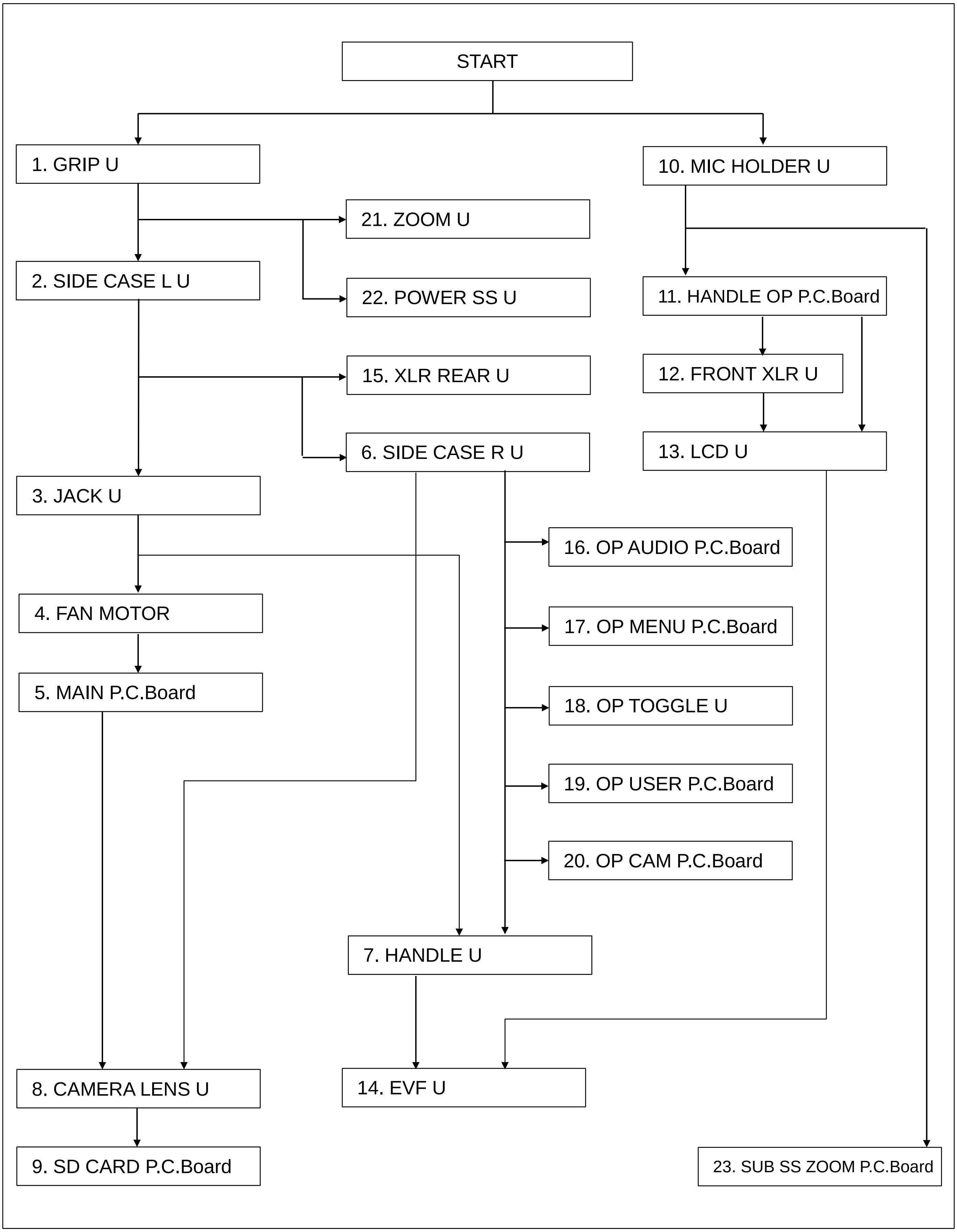
CONTENTS

Disassembly Flowchart DIS-1

1. Removal of Removal of GRIP U DIS-2
2. Removal of SIDE CASE L U DIS-3
3. Removal of JACK U. DIS-4
4. Removal of FAN MOTOR. DIS-5
5. Removal of MAIN P.C.Board. DIS-6
6. Removal of SIDE CASE R U. DIS-6
7. Removal of HANDLE U DIS-8
8. Removal of CAMERA LENS U DIS-10
9. Removal of SD CARD P.C.Board DIS-12
10. Removal of MIC HOLDER U DIS-14
11. Removal of HANDLE OP P.C.Board DIS-15
12. Removal of FRONT XLR U DIS-16
13. Removal of LCD U (LCD SLIDE U) DIS-16
14. Removal of EVF U DIS-17
15. Removal of XLR REAR P.C.Board DIS-18
16. Removal of OP AUDIO P.C.Board DIS-18
17. Removal of OP MENU P.C.Board DIS-19
18. Removal of OP TOGGLE U DIS-19
19. Removal of OP USER P.C.Board DIS-20
20. Removal of OP CAM P.C.Board DIS-20
21. Removal of ZOOM U DIS-21
22. Removal of POWER SS U DIS-22
23. Removal of SUB SS ZOOM P.C.Board DIS-22

Disassembly Flowchart

NOTE: Please put on your hand gloves, when you perform disassembly and assembly of equipment.



1. Removal of GRIP U

1. Unscrew the 2 screws (A) as shown in Figure 1-1.
2. Unscrew the screw (B) as shown in Figure 1-1.
3. Unscrew the 2 screws (C) as shown in Figure 1-1.
4. Unscrew the 2 screws (D) as shown in Figure 1-1.

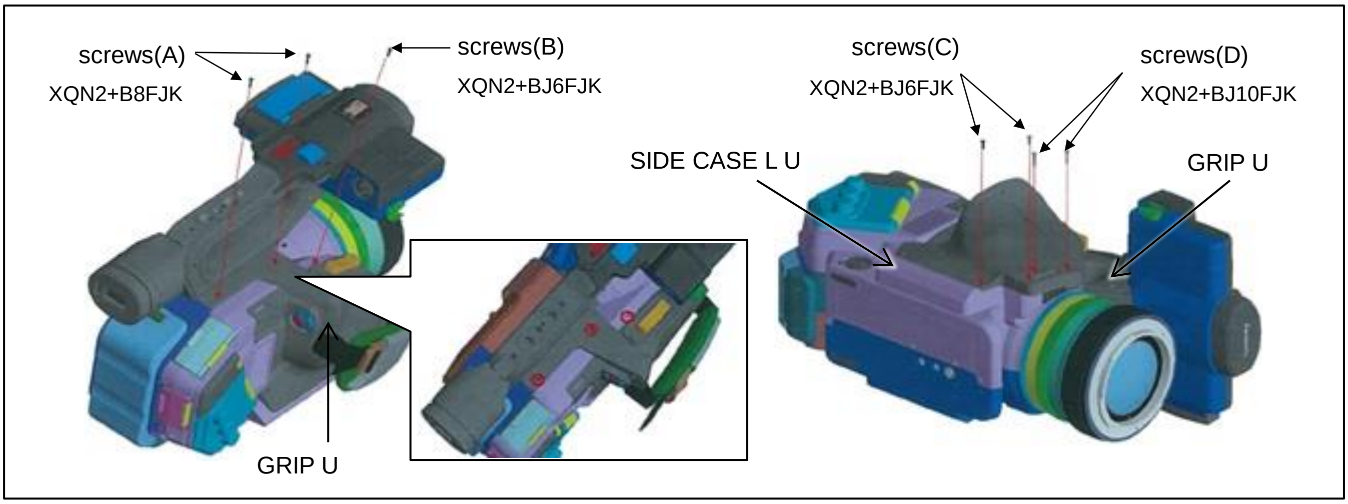


Figure 1-1

5. Unscrew the 5 screws (E) as shown in Figure 1-2.
6. Disconnect the SS GYRO FFC from MAIN P.C.Board and remove the GRIP U as shown in figure 1-2.

Note:
When remove the GRIP U, please pay attention not to make any damage on the SS GYRO FFC

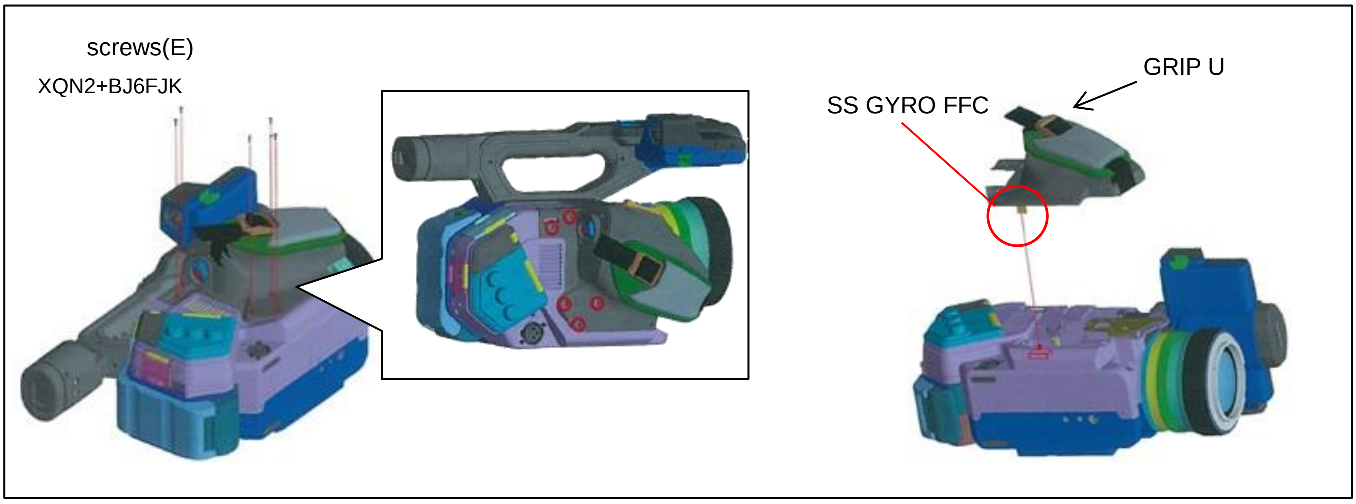
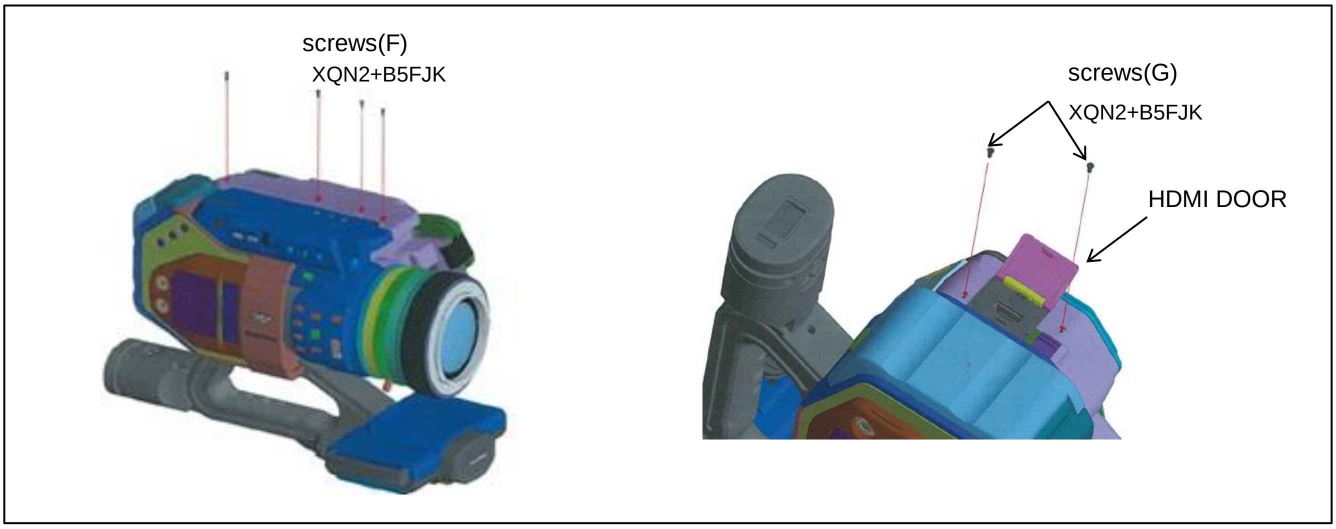


Figure 1-2

2. Removal of SIDE CASE L U

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. Unscrew the 4 screws (F) as shown in Figure 2-1.
3. Unscrew the 4 screws (G) as shown in Figure 2-1.



.

Figure 2-1

4. Unscrew the 4 screws (H) as shown in Figure 2-2.

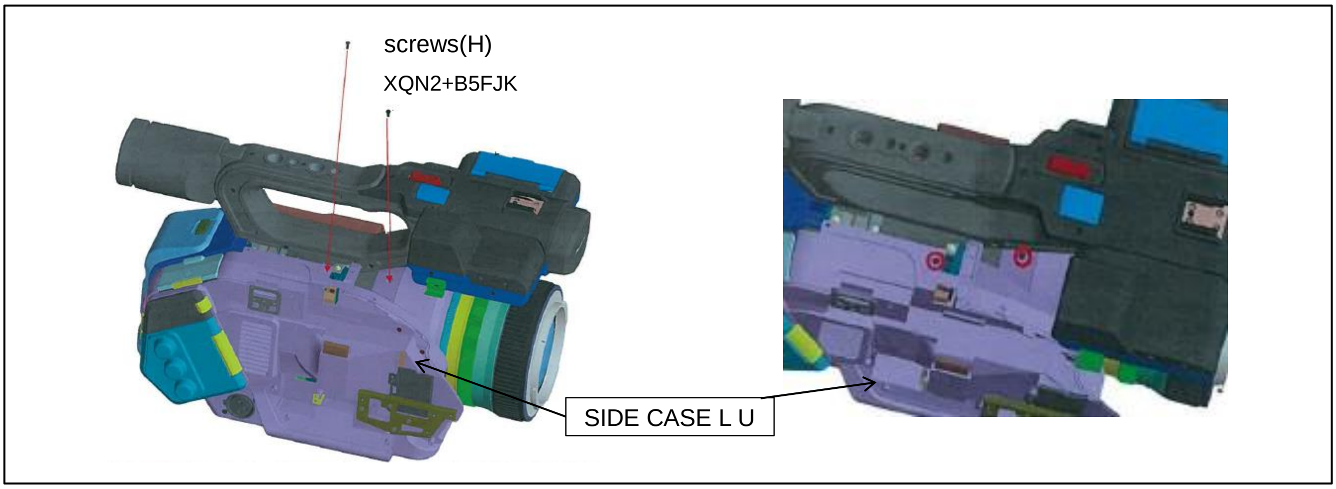


Figure 2-2

7. Unscrew the 4 screws (I) as shown in Figure 2-3.
8. Unscrew the 2 screws (J) as shown in Figure 2-3.
9. Unscrew the 2 screws (K) as shown in Figure 2-3.
10. Unscrew the screw (L) as shown in Figure 2-3.
11. Unscrew the 5 screws (M) and remove SIDE CASE L U as shown in Figure 2-3.

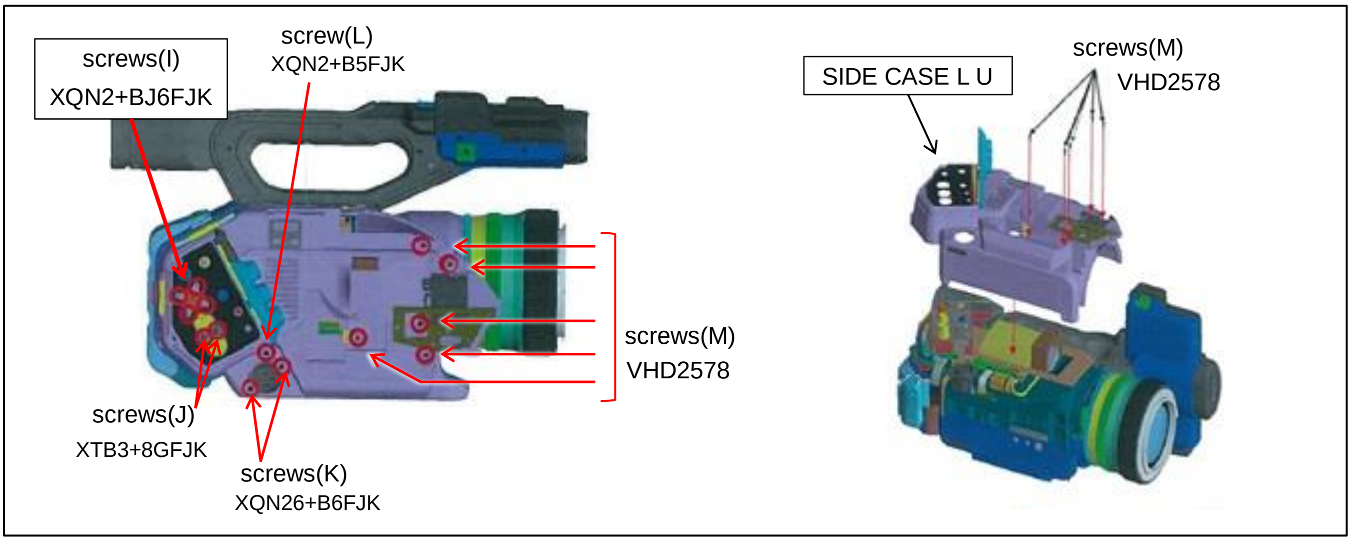


Figure 2-3

3. Removal of JACK U

1. Unscrew the 2 screws (N) as shown in Figure 3-1.
2. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
3 .Remove the SIDE CASE L U. (Refer to the item 2.removal of SIDE CASE L U)

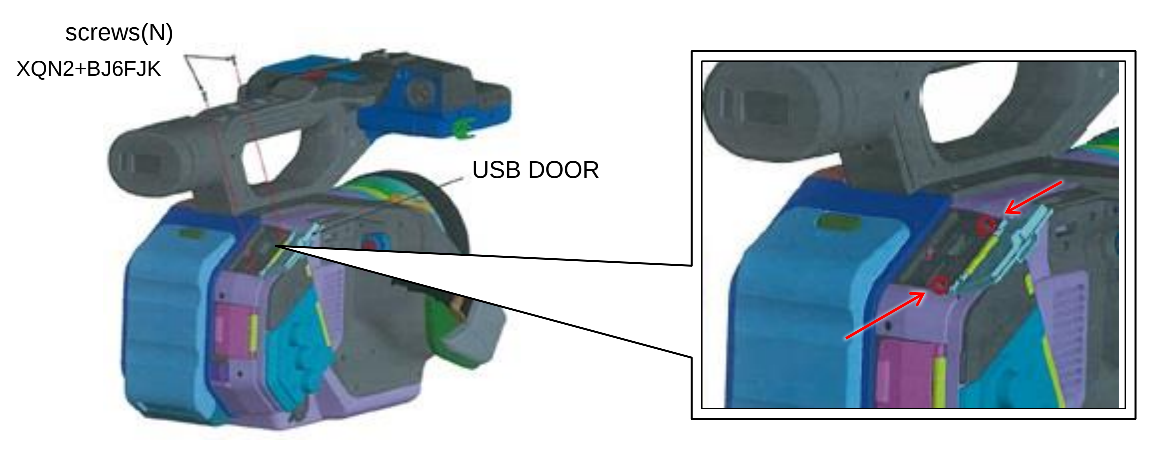


Figure 3-1

4 Unscrew the 5 screws (O) as shown in Figure 3-2.
5 Disconnect the SDI CABLE, BNC FFC and BATT WIRE CABLE, and remove JACK U as shown in figure 3-2.

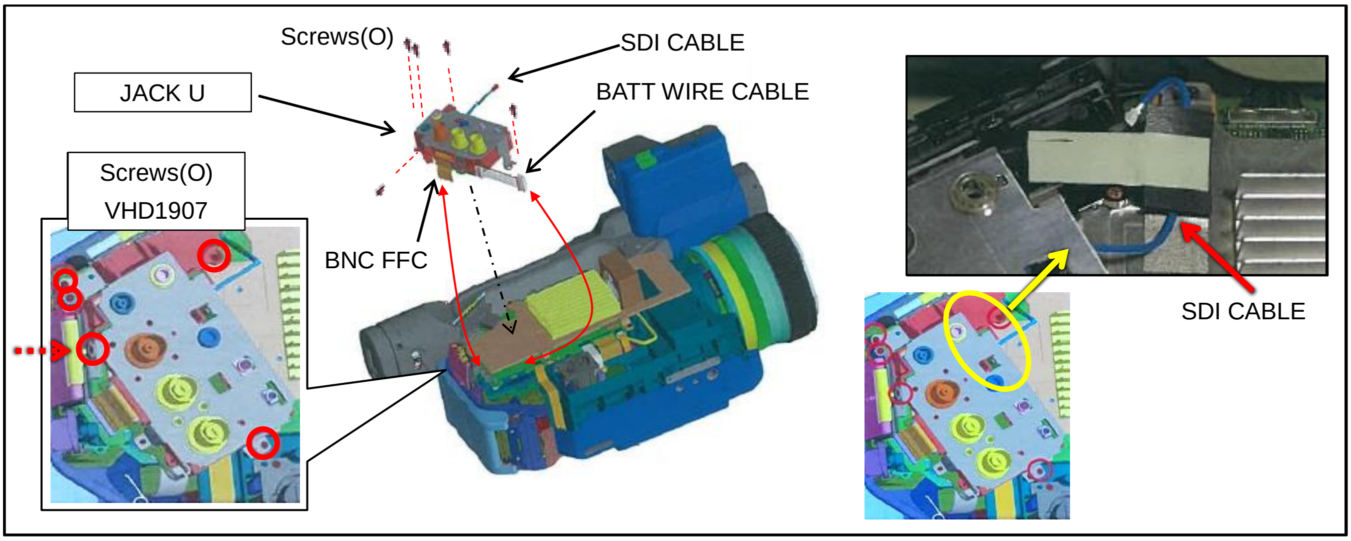


Figure 3-2

4. Removal of FAN MOTOR

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. Remove the SIDE CASE L U.(Refer to the item 2.removal of SIDE CASE L U)
3. Remove the JACK U. (Refer to the item 3.Removal of JACK U)
4. Unscrew the 5 screws (P) and remove MAIN RADI PLATE as shown in figure 4-1.
5. Disconnect the LENS FPC A and FAN CONNECTOR as shown in figure 4-1.
6. Unscrew the 2 screws (Q) and remove FAN MOTOR as shown in figure 4-1.

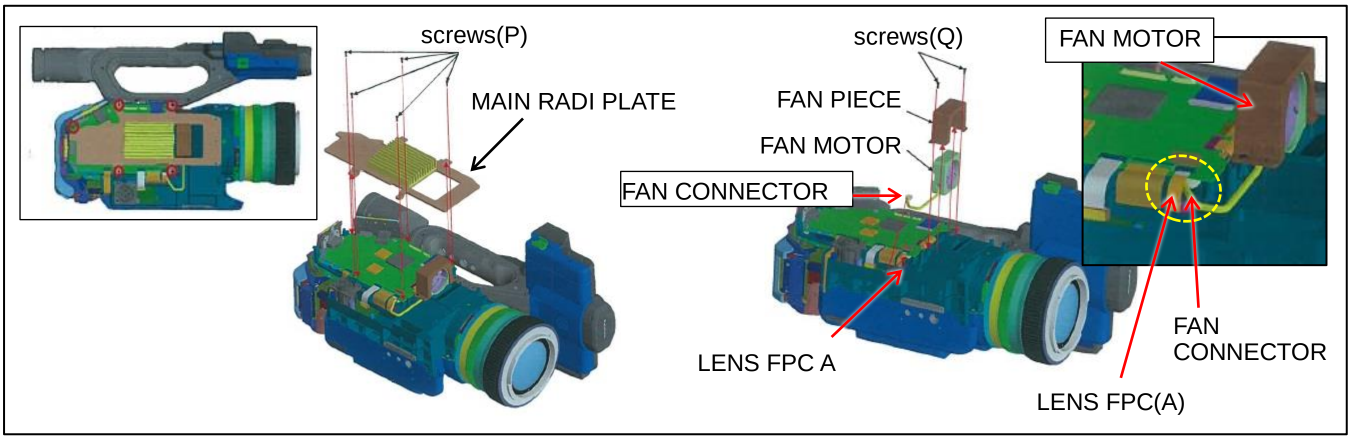


Figure 4-1

5. Removal of MAIN P.C.Board

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. Remove the SIDE CASE L U.(Refer to the item 2.removal of SIDE CASE L U)
3. Remove the JACK U. (Refer to the item 3.Removal of JACK U)
4. Remove the FAN MOTOR. (Refer to the item 4.Removal of FAN MOTOR)
5. Disconnect the 10 flat cables on the MAIN P.C.Board and remove the MAIN P.C.Board as shown in figure 5-1.

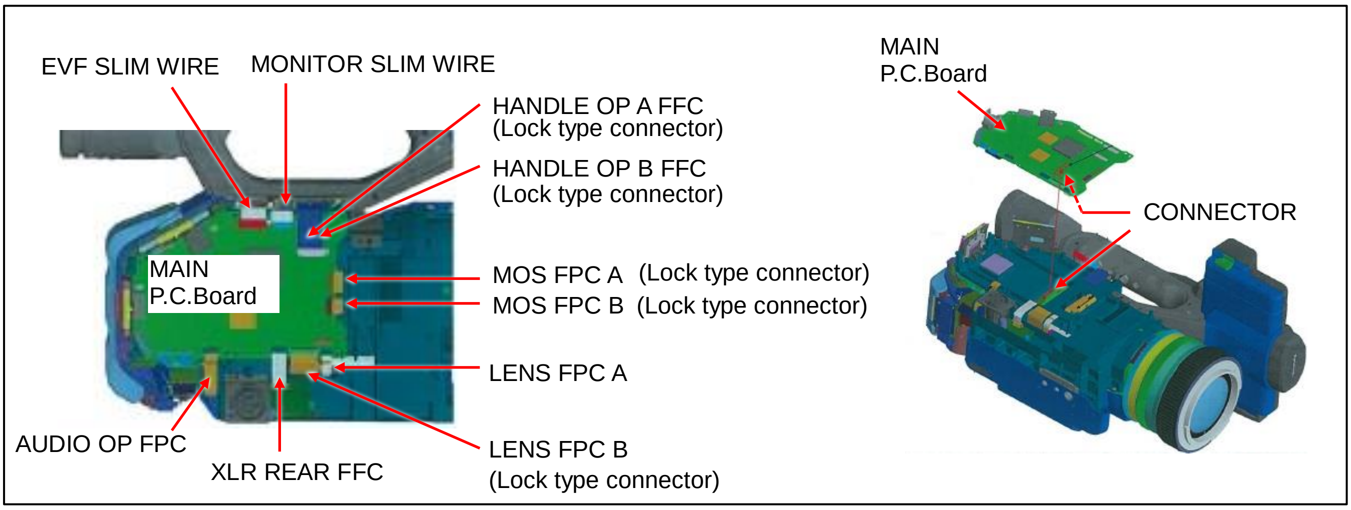


Figure 5-1

6. Removal of SIDE CASE R U

1.Set the ZOOM switch to [SERVO] as shown in figure 6-1
2.Remove the GRIP U.(Refer to the item 1.Removal of GRIP U)
3.Remove the SIDE CASE L U.(Refer to the item 2.removal of SIDE CASE L U)
4.Unscrew the 5 screws (R) as shown in figure 6-2.
5.Unscrew the 3 screws (S) as shown in figure 6-2.
6.Remove the REAR PAD as shown in figure 6-2.

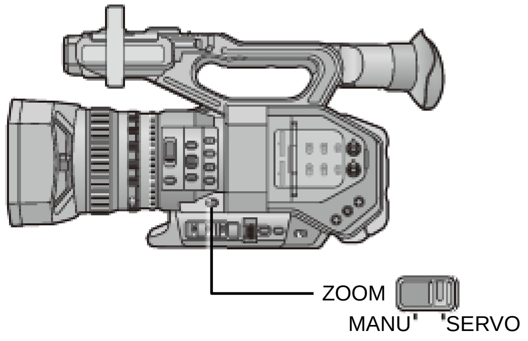


Figure 6-1

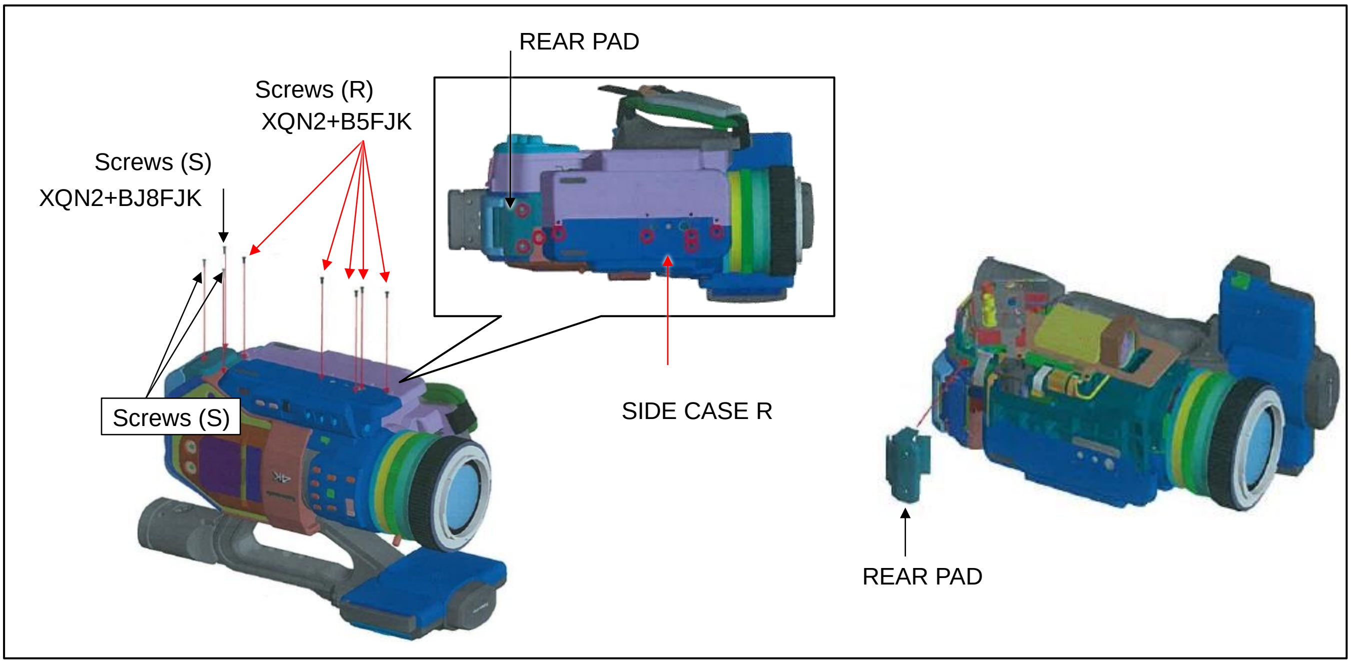


Figure 6-2

7. Unscrew the 3 screws (T) as shown in figure 6-3.
8. Open the BATT DOOR and unscrew the 2 screws (U) as shown in figure 6-3.

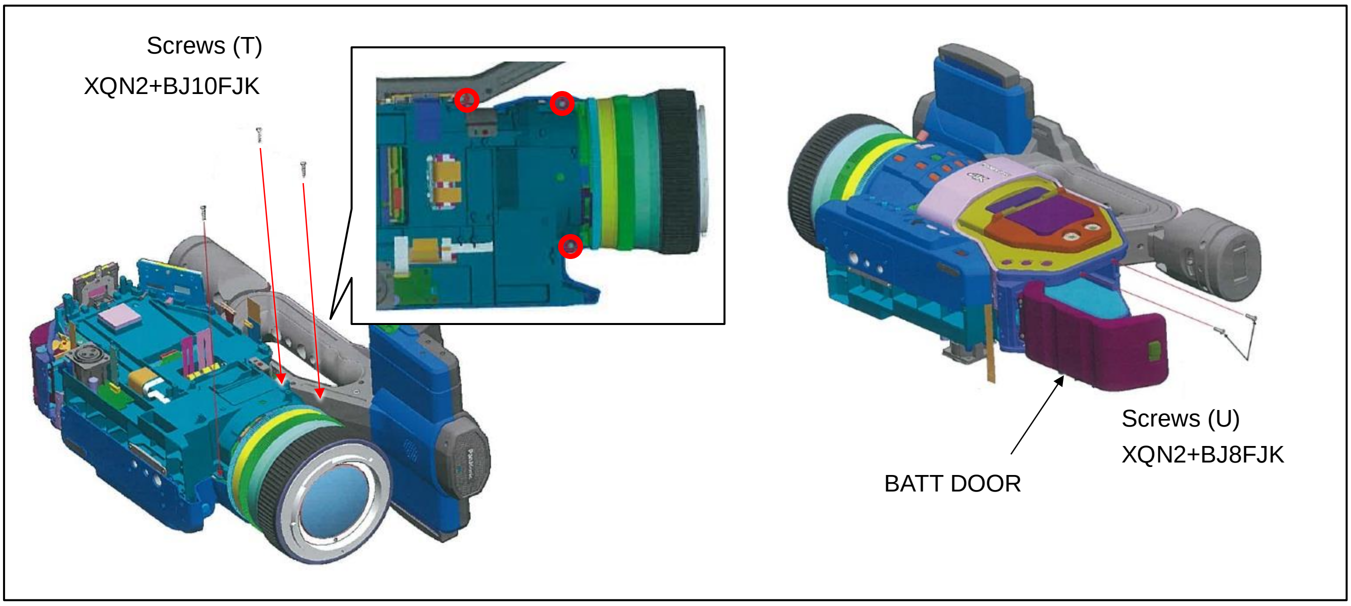


Figure 6-3

9. Unscrew the screw (V) as shown in figure 6-4.
10. Unscrew the screw (W) as shown in figure 6-4.
11. Unscrew the screw (X) as shown in figure 6-4.
12. Disconnect AUDIO OP FPC on the MAIN P.C.Board and remove the SIDE CASE R U.

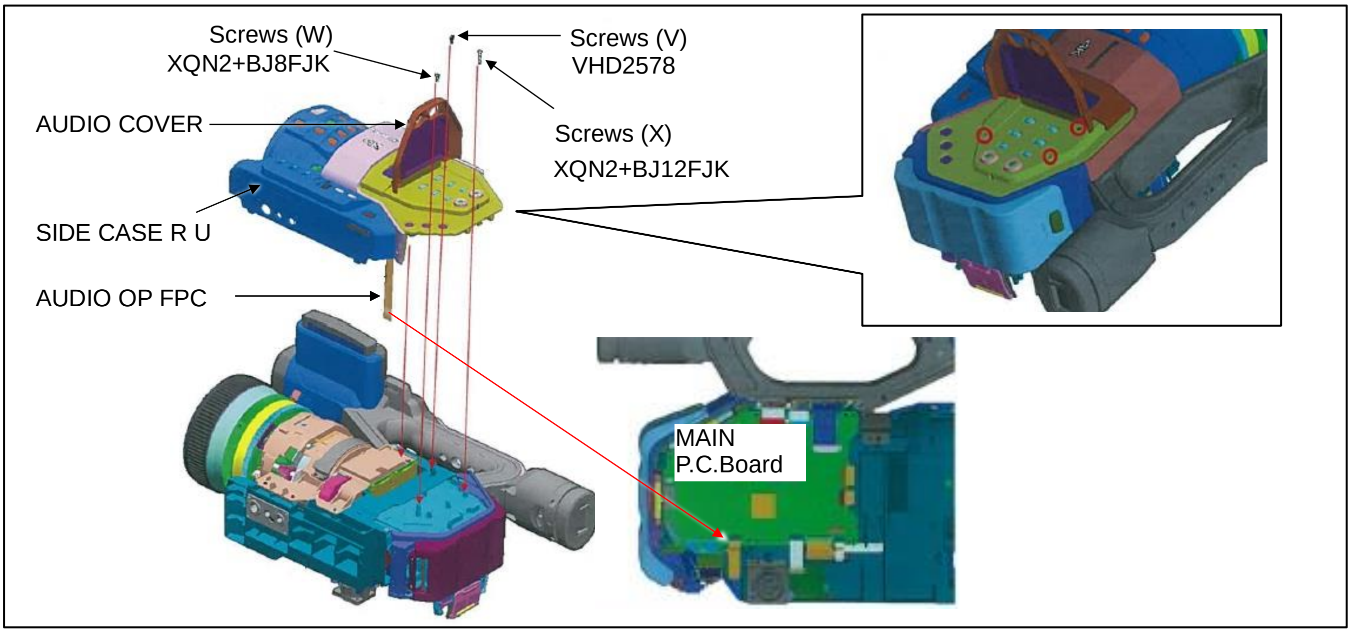


Figure 6-4

7. Removal of HANDLE U

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. Remove the SIDE CASE L U. (Refer to the item 2.removal of SIDE CASE L U)
3. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
4. Remove the JACK U. (Refer to the item 3.removal of JACK U)
5. Remove the MAIN RADI PLATE. (Refer to the item 4.removal of FAN MOTOR)
6. Disconnect 4 cables on the MAIN P.C.Board as shown in figure 7-1.

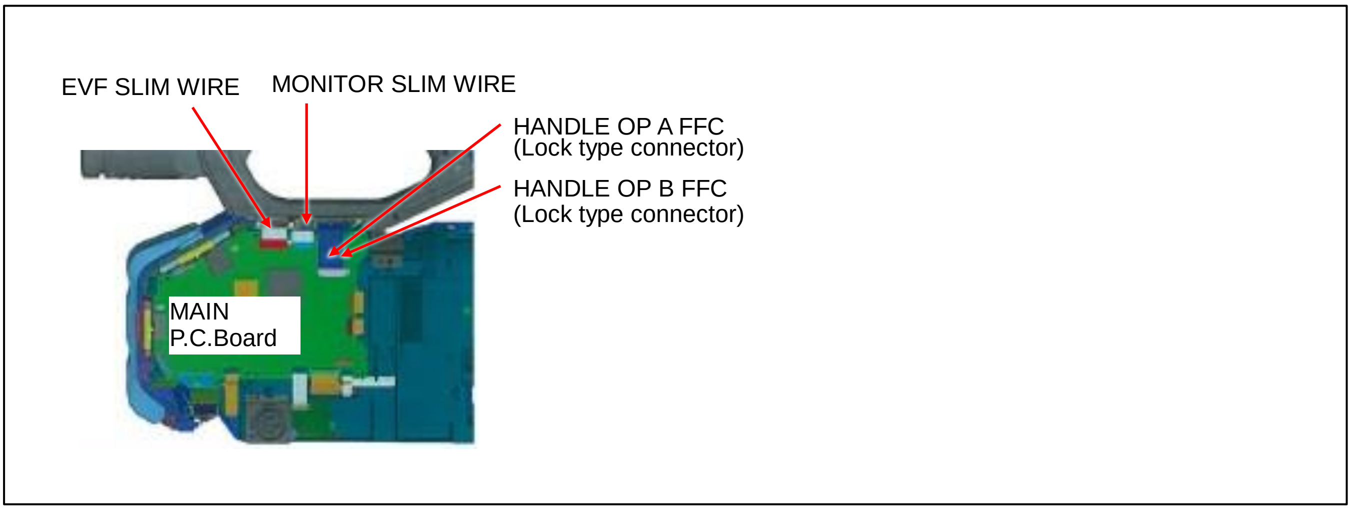


figure 7-1.

7. Unscrew the 6 screws (Y) as shown in figure 7-2.

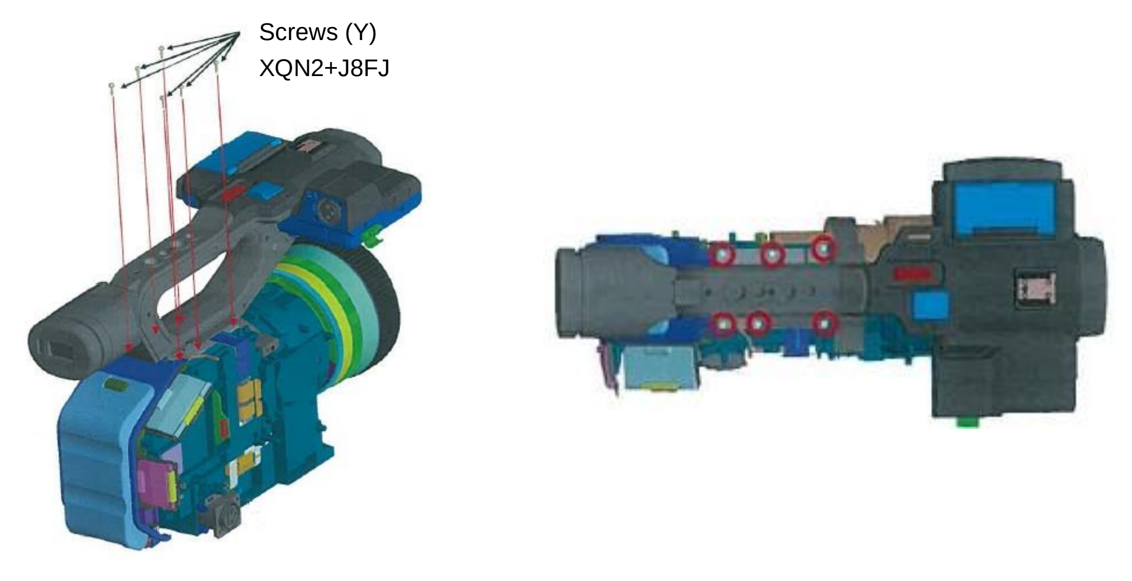


figure 7-2

8. Open the BATT DOOR and unscrew the 2 screws (Z) as shown in figure 7-3.

9. Slide the HANDLE U forward and remove it as shown in figure 7-3.

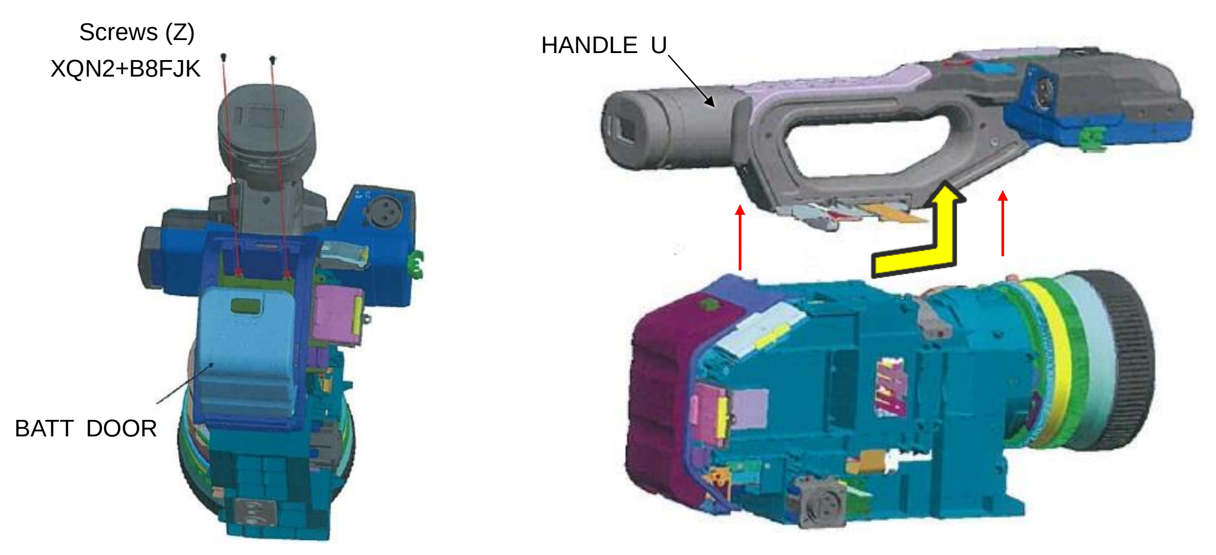


figure 7-3

8. Removal of CAMERA LENS U

1. Remove the GRIP U.(Refer to the item 1.Removal of GRIP U)
2. Remove the SIDE CASE L U.(Refer to the item 2.removal of SIDE CASE L U)
3. Remove the JACK U.(Refer to the item 3.removal of JACK U)
4. Remove the FAN MOTOR.(Refer to the item 4.removal of FAN MOTOR)
5. Remove the MAIN P.C.Board.(Refer to the item 5.Removal of MAIN P.C.Board)
6. Set the ZOOM switch to [SERVO] as shown in figure 8-1

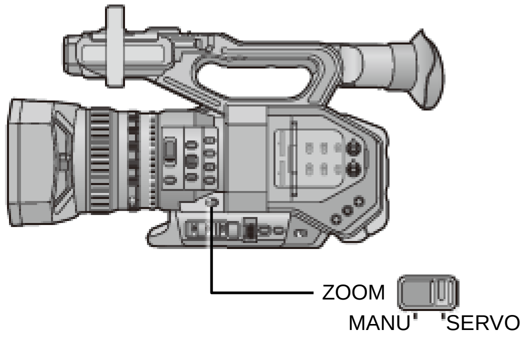


figure 8-1

6. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
7. Unscrew the screw (a) as shown in figure 8-2
8. Unscrew the screw (b) as shown in figure 8-2.
9. Unscrew the screw (Y) and remove the RING ORNAMENT as shown in figure 8-2.

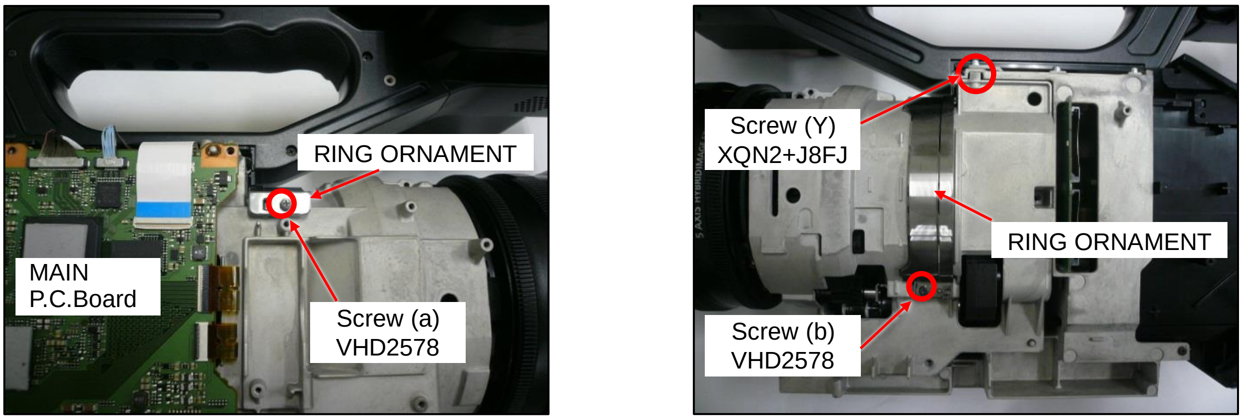


figure 8-2

10. Unscrew the 3 screws (c) as shown in figure 8-3.
11. Unscrew the 4 screws (d) as shown in figure 8-3.

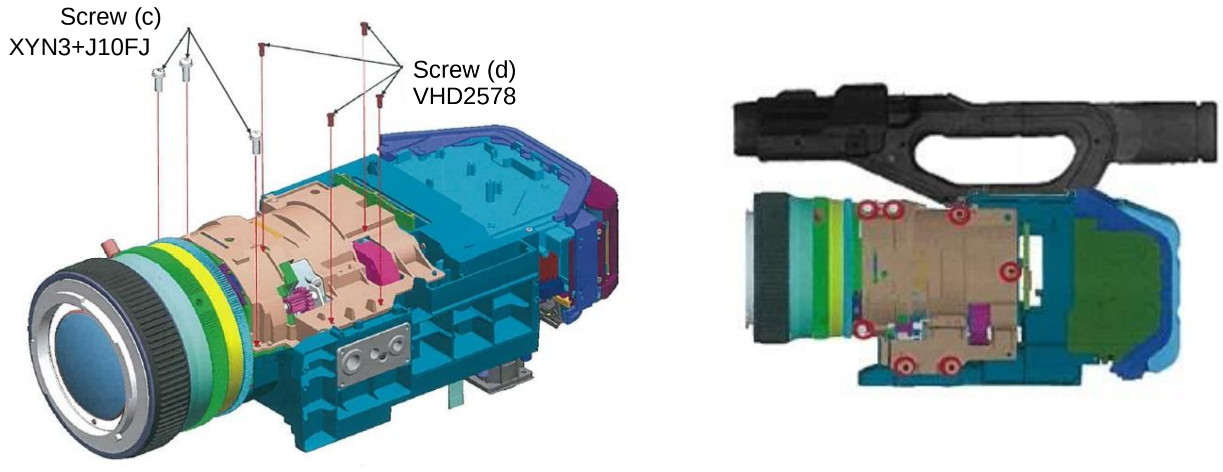


figure 8-3

12. Remove the LENS FRAME R and CAMERA LENS U as shown in figure 8-4.

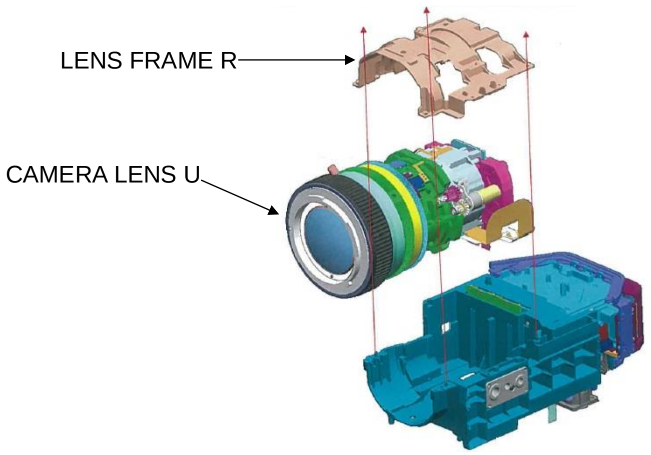


figure 8-4

9. Removal of SD CARD P.C.Board

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. Remove the SIDE CASE L U. (Refer to the item 2.removal of SIDE CASE L U)
3. Remove the JACK U. (Refer to the item 3.removal of JACK U)
4. Remove the FAN MOTOR. (Refer to the item 4.removal of FAN MOTOR)
5. Remove the MAIN P.C.Board. (Refer to the item 5.Removal of MAIN P.C.Board)
6. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
7. Remove the CAMERA LENS U. (Refer to the item 8.Removal of CAMERA LENS U)
8. Unscrew the screw (e) as shown in figure 9-1.

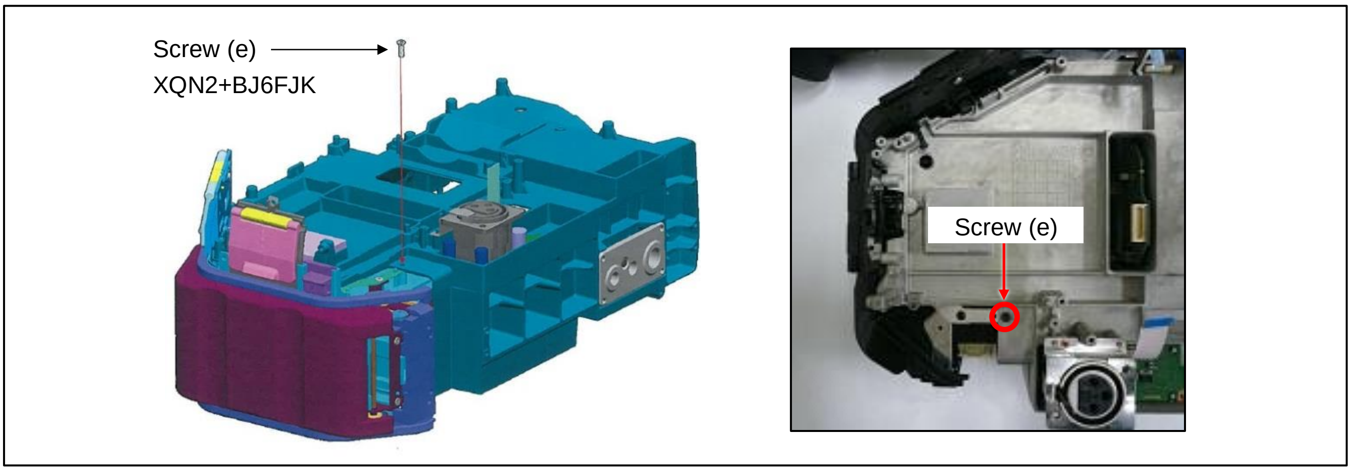


figure 9-1

9. Unscrew the 2 screws (f) as shown in figure 9-2
10. Unscrew the screw (g) as shown in figure 9-2
11. Release the locking tab and remove the REAR CASE U as shown in figure 9-2.

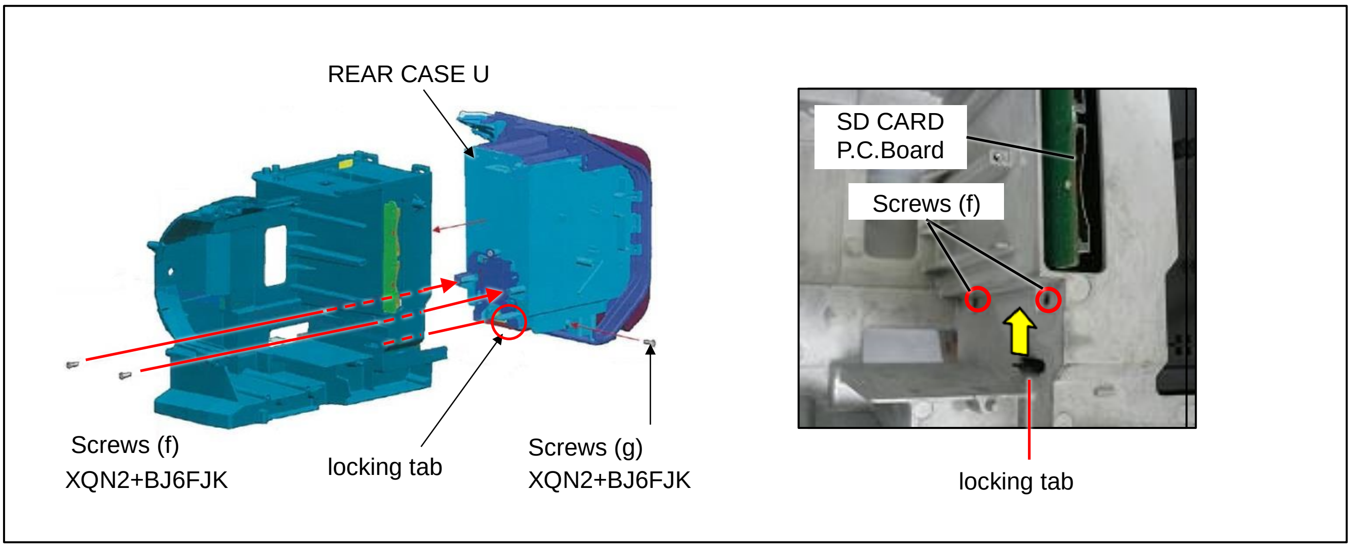


figure 9-2

11. Unscrew the 2 screws (h) and remove the SD CARD P.C.Board as shown in figure 9-3

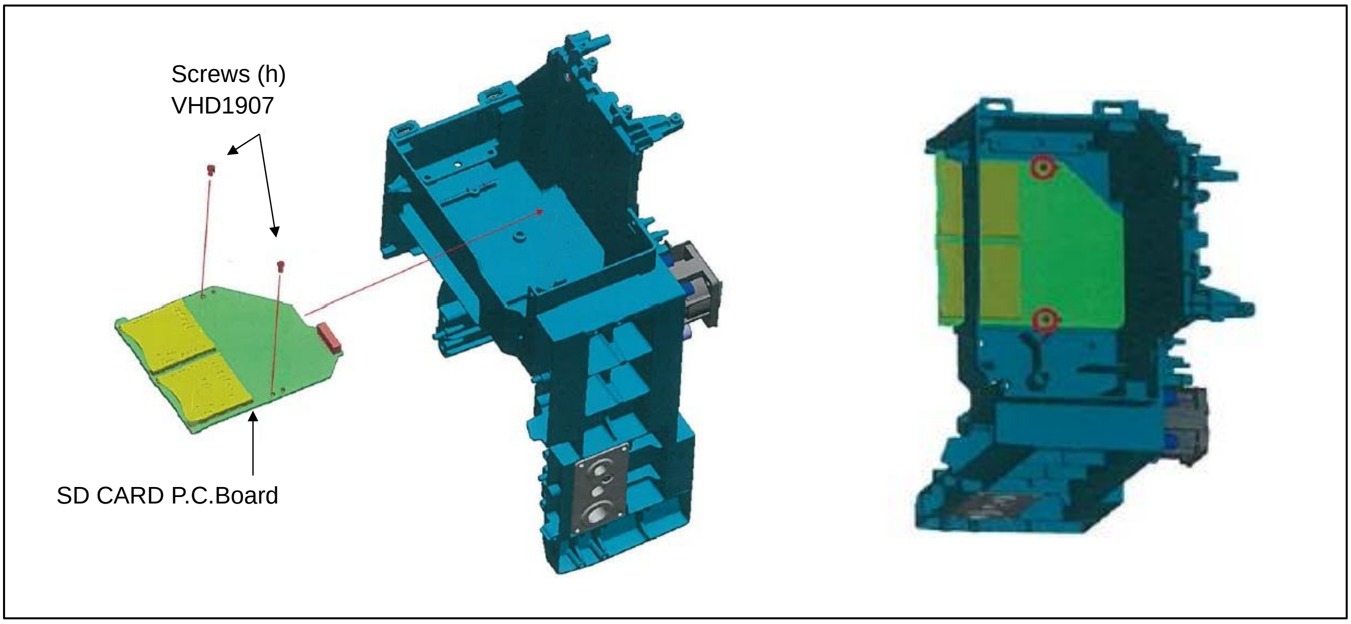


figure 9-3

When you install the REAR CASE U, please pay attention to the stopper of USB INNER COVER position as shown in figure 9-4.

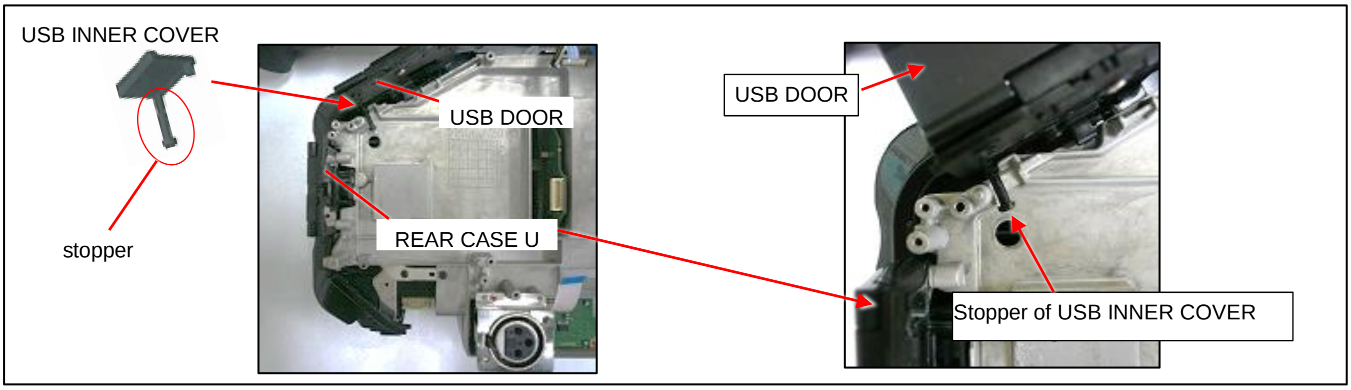


figure 9-4

10. Removal of MIC HOLDER U

1. Unscrew the screw (i) as shown in figure 10-1
2. Remove the MIC COVER as shown in figure 10-1
3. Unscrew the 2 screws (k) as shown in figure 10-1
4. Unscrew the 2 screws (m) and remove MIC CASE as shown in figure 10-1

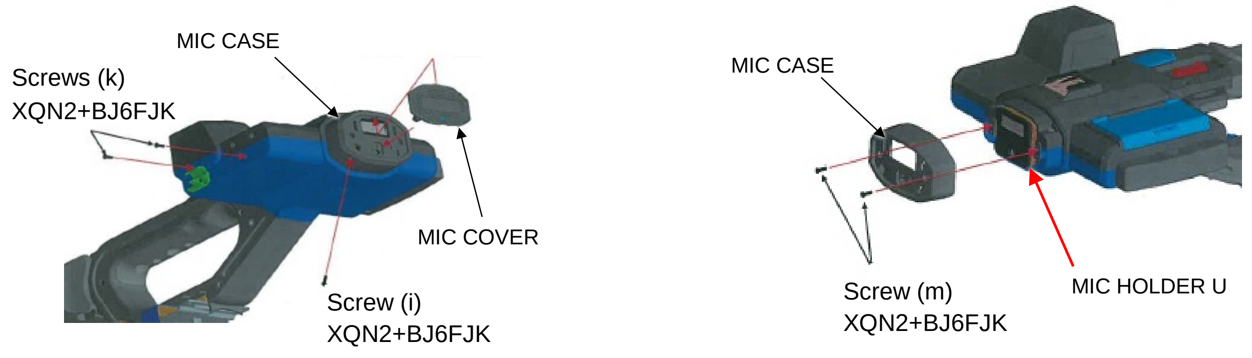


figure 10-1

5. Unscrew the 2 screws (n) as shown in figure 10-2.
6. Unscrew the 7 screws (o) as shown in figure 10-2.
7. Disconnect the SUB SS ZOOM FFC from HANDLE OP P.C.Board and remove HANDLE CASE T U as shown in figure 10-2.

Note:
When open the HANDLE CASE T U, please pay attention not to make any damage of the SUB SS ZOOM FFC

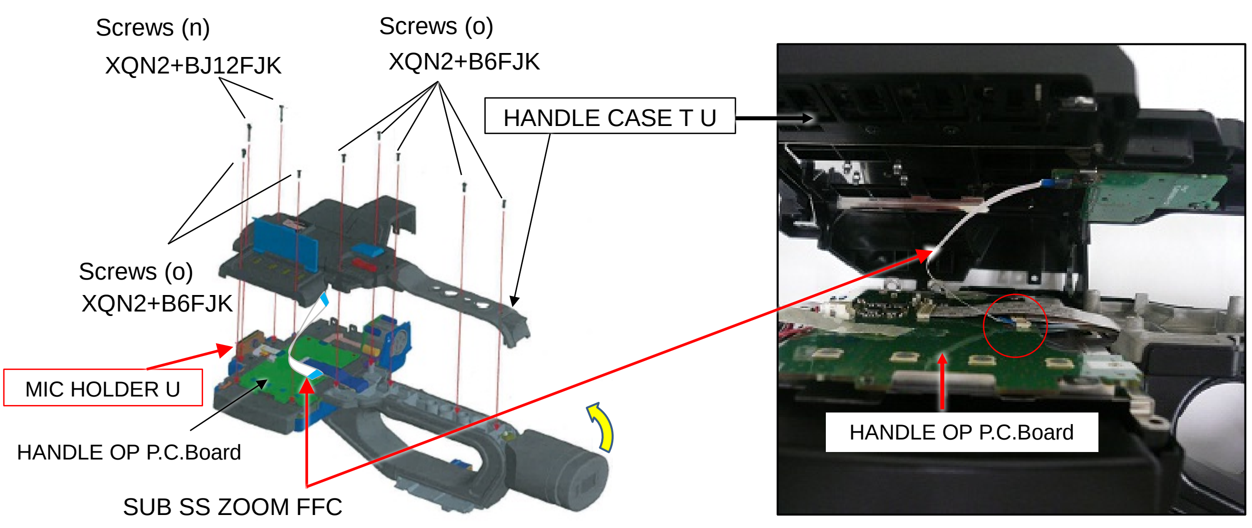


figure 10-2

8. Unscrew the 2 screws (p) as shown in figure 10-3
9. Disconnect the A WIRED FFC and remove HANDLE CASE T U as shown in figure 10-3

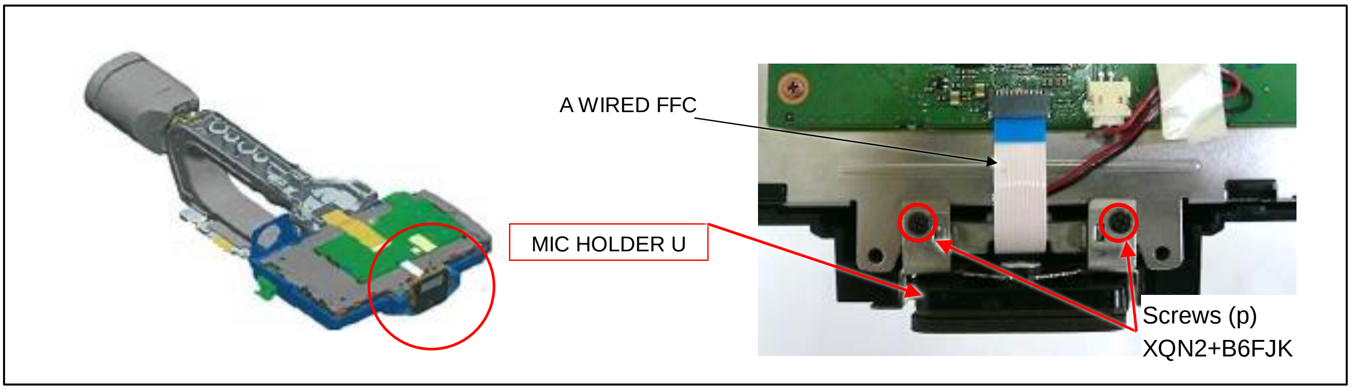


figure 10-3

11. Removal of HANDLE OP P.C.Board

1. Remove the HANDLE CASE T U. (Refer to the item 10.Removal of MIC HOLDER U)
2. Unscrew the 3 screws(q) as shown in figure 11-1.
3. Disconnect the SPEAKER CABLE as shown in figure 11-1.
4. Disconnect the FRONT XLR FFC, A WIRED FFC, HANDLE OP A FFC and HANDLE OP B FFC as shown in figure 11-1.
5. Disconnect the MONITOR SLIM WIRE, LCD-FPC and remove the HANDLE OP P.C.Board.

Note:
When remove the HANDLE OP P.C.Board, please pay attention not to make any damage of the LCD-FPC.

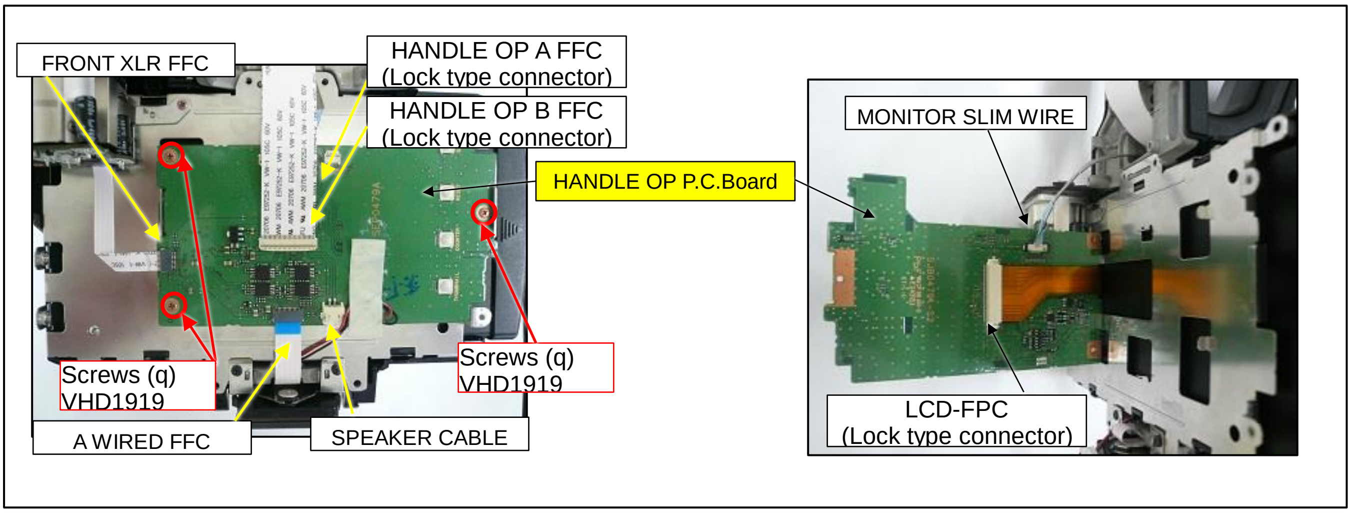


figure 11-1

12. Removal of FRONT XLR U

1. Remove the HANDLE OP T U. (Refer to the item 10.Removal of MIC HOLDER U)
2. Unscrew the 2 screws(r) as shown in figure 12-1.
3. Unscrew the screw(s) as shown in figure 12-1.
4. Disconnect the FRONT XLR FFC and remove FRONT XLR U as shown in figure 12-1.

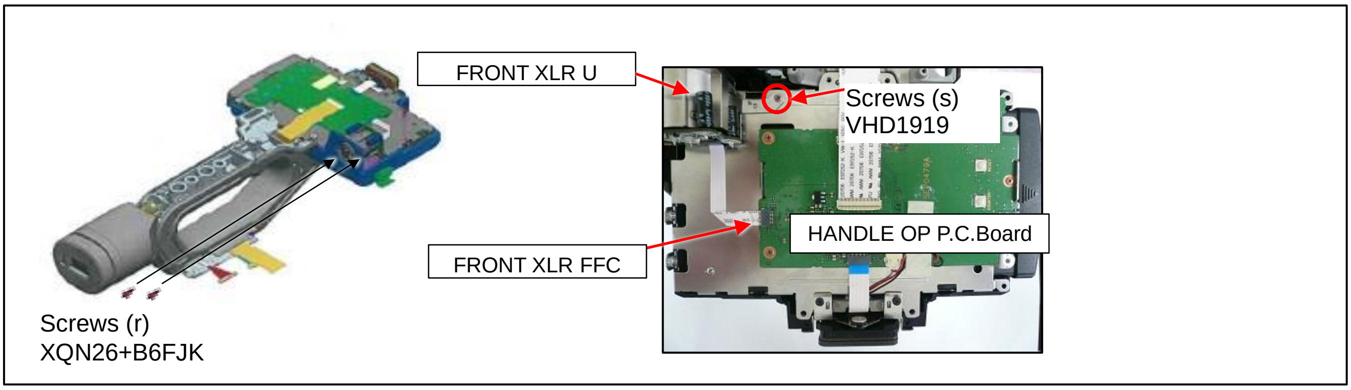


figure 12-1

13. Removal of LCD U (LCD SLIDE U)

1. Remove the MIC HOLDER U. (Refer to the item 10.Removal of MIC HOLDER U)
2. Remove the HANDLE OP P.C.Board. (Refer to the item 11.Removal of HANDLE OP P.C.Board)
3. Remove the FRONT XLR U. (Refer to the item 12.Removal of FRONT XLR U)
4. Unscrew the 2screws (t) as shown in figure 13-1.
5. Unscrew the 2screws (u) as shown in figure 13-1.
6. Release the 4 locking tabs and remove the LCD SLIDE U as shown in figure 13-1.

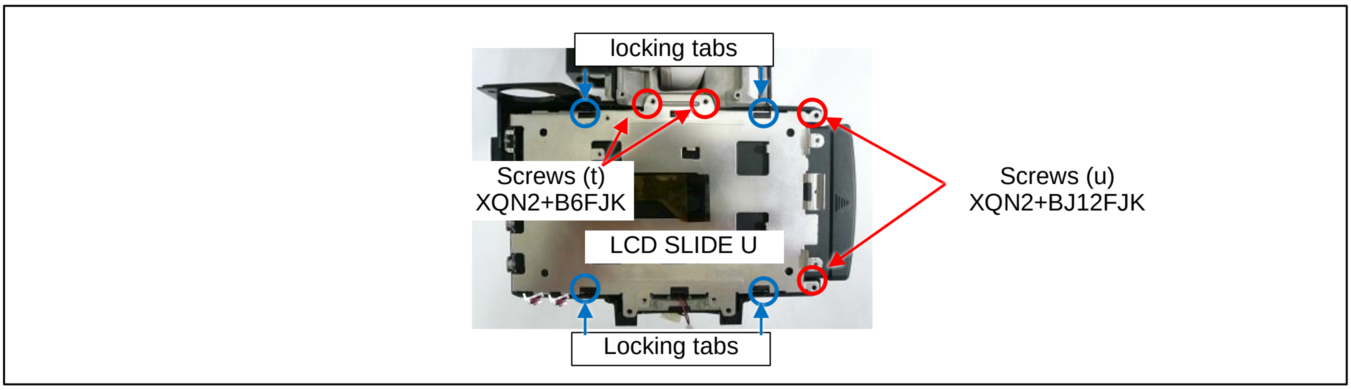


figure 13-1

14. Removal of EVF U

1. Remove the HANDLE U. (Refer to the item 7.Removal of HANDLE U)
2. Remove the LCD U. (Refer to the item 13.Removal of LCD U(LCD SLIDE U))
3. Remove the HANDLE CASE B U as shown in figure 14-1.
4. Unscrew the screws (v’) and remove HA CARBON FRAME B as shown in figure 14-1.
4. Unscrew the 4 screws (v) as shown in figure 14-1.
5. Release the 2 locking tabs and remove the HANDLE CASE L as shown in figure 14-1.

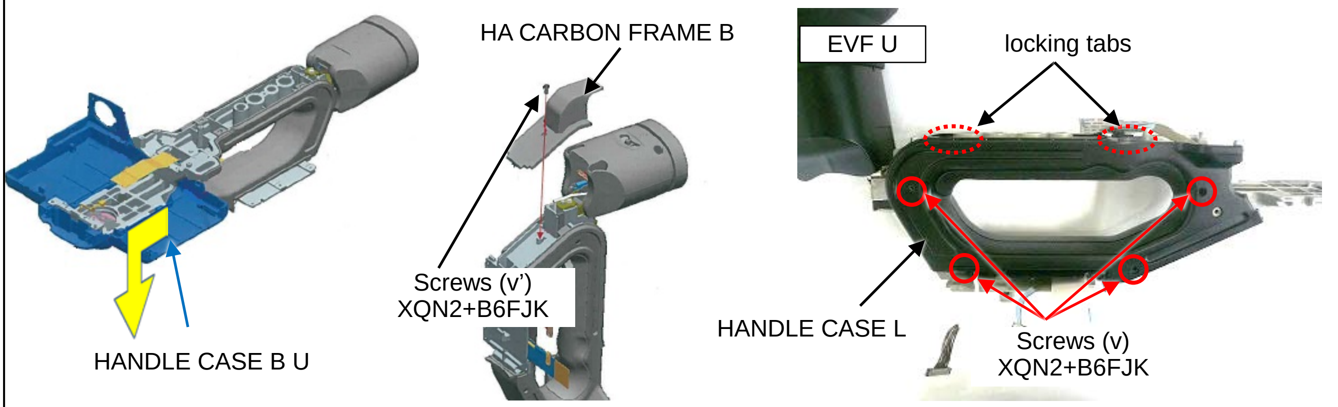


figure 14-1

4.Unscrew the 2 screws (w) and remove the EVF U as shown in figure 14-2.

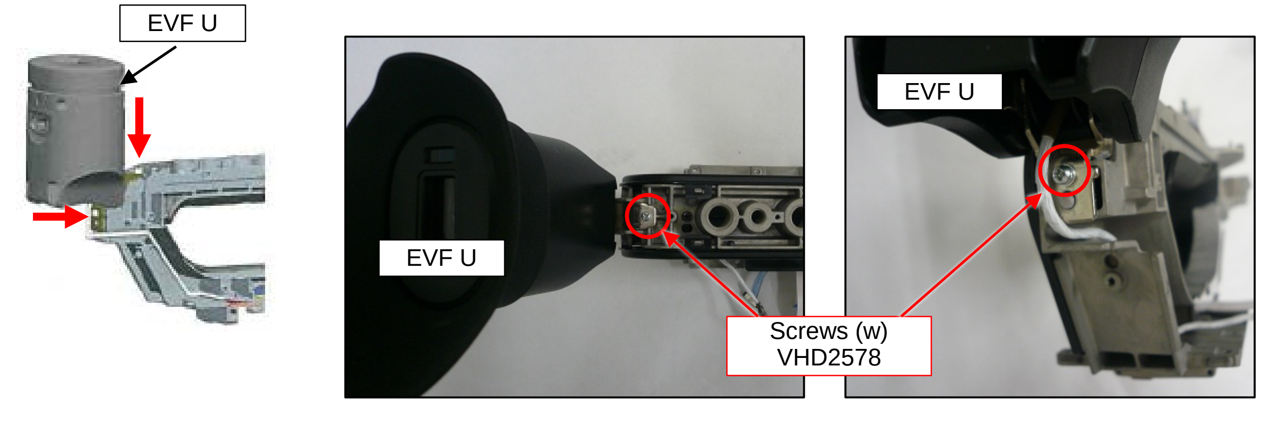


figure 14-2

15. Removal of XLR REAR P.C.Board

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. Remove the SIDE CASE L U. (Refer to the item 2.removal of SIDE CASE L U)
3. Disconnect the XLR REAR FFC as shown in figure 15-1.
4. Unscrew the 2 screws (x) and remove the XLR REAR P.C.Board as shown in figure 15-1.

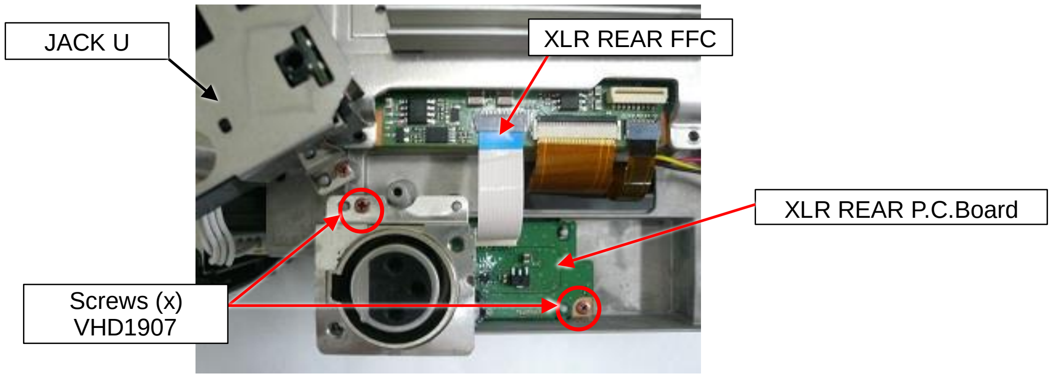


figure 15-1

16. Removal of OP AUDIO P.C.Board

1. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
2. Disconnect the SEL OP FFC and AUDIO OP FFC as shown in figure 16-1
3. Unscrew the 5 screws(y) and remove the OP AUDIO P.C.Board as shown in figure 16-1.

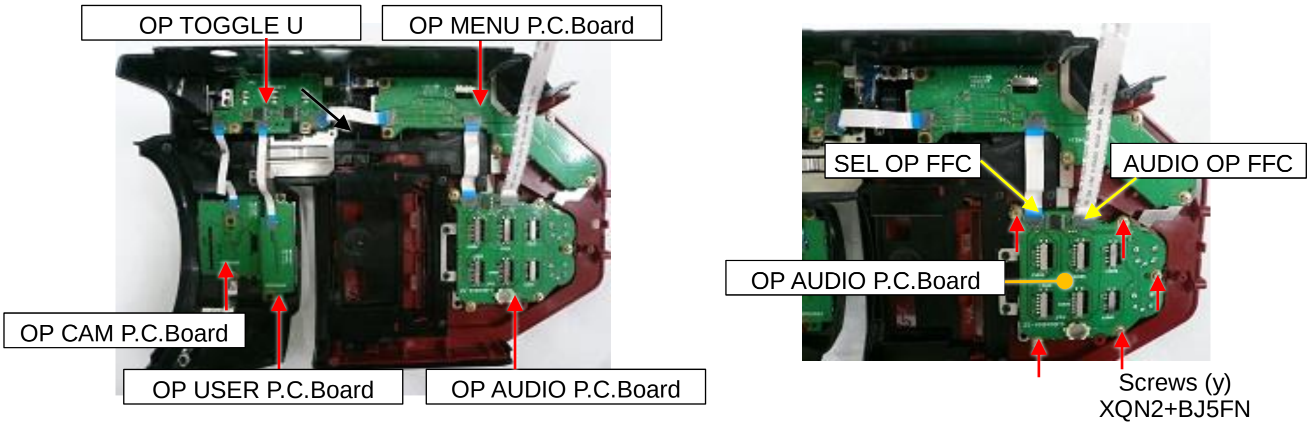


figure 16-1

Note:

When you install the OP AUDIO P.C.Board,please set each slide switch position on the OP AUDIO P.C.Board so that the switch position is set to the notch of slide knob as shown in figure 16-2.

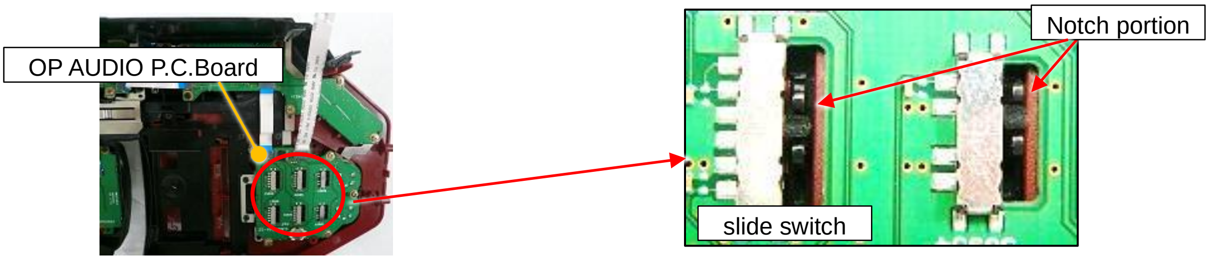


figure 16-2

17. Removal of OP MENU P.C.Board

1. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
2. Disconnect the SEL OP FFC and SUB OP FFC as shown in figure 17-1
3. Unscrew the 6 screws(z) and remove the OP AUDIO P.C.Board as shown in figure 17-1.

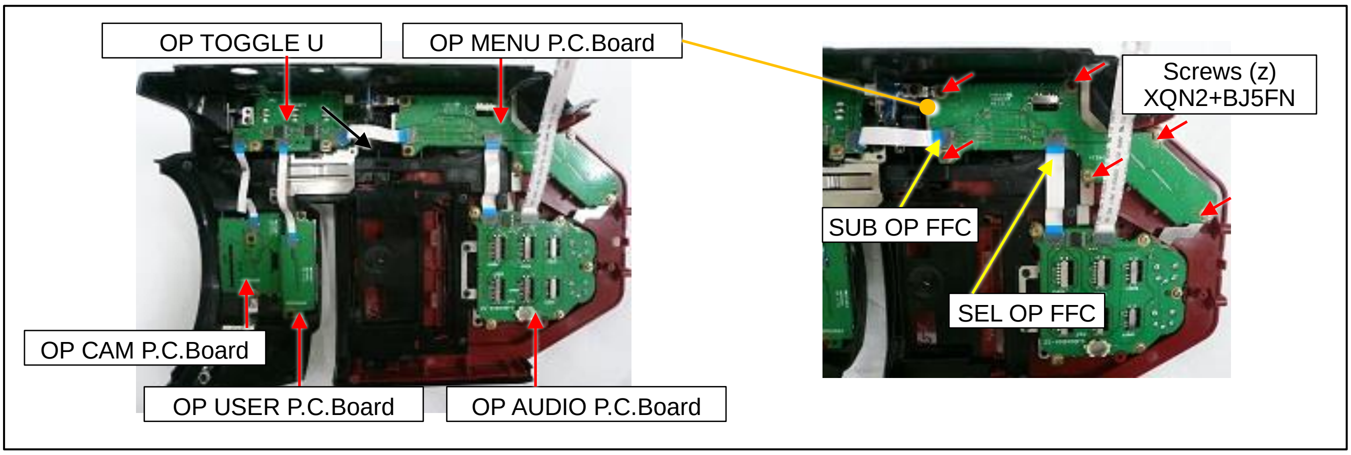


figure 17-1

18. Removal of OP TOGGLE U

1. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
2. Disconnect the SUB OP FFC, USER OP FFC and CAM OP FFC as shown in figure 18-1
3. Unscrew the 3 screws(A’) and remove the OP TOGGLE U as shown in figure 18-1.

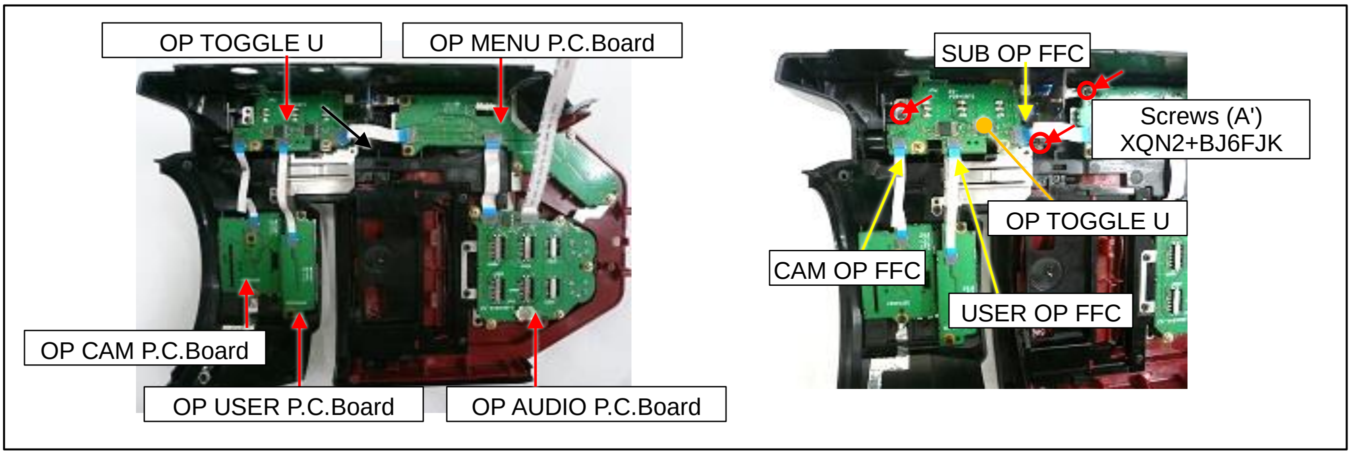


figure 18-1

19. Removal of OP USER P.C.Board

1. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
2. Disconnect the USER OP FFC as shown in figure 19-1
3. Unscrew the 2 screws(B’) and remove the OP USER P.C.Board as shown in figure 19-1.

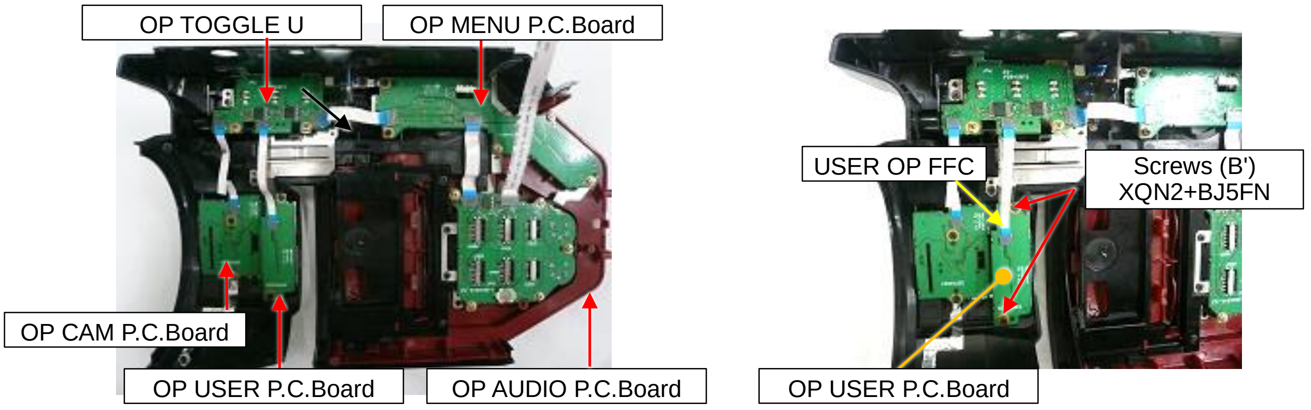


figure 19-1

20. Removal of OP CAM P.C.Board

1. Remove the SIDE CASE R U. (Refer to the item 6.Removal of SIDE CASE R U)
2. Disconnect the CAM OP FFC as shown in figure 20-1
3. Unscrew the 2 screws(C’) and remove the OP CAM P.C.Board as shown in figure 20-1.

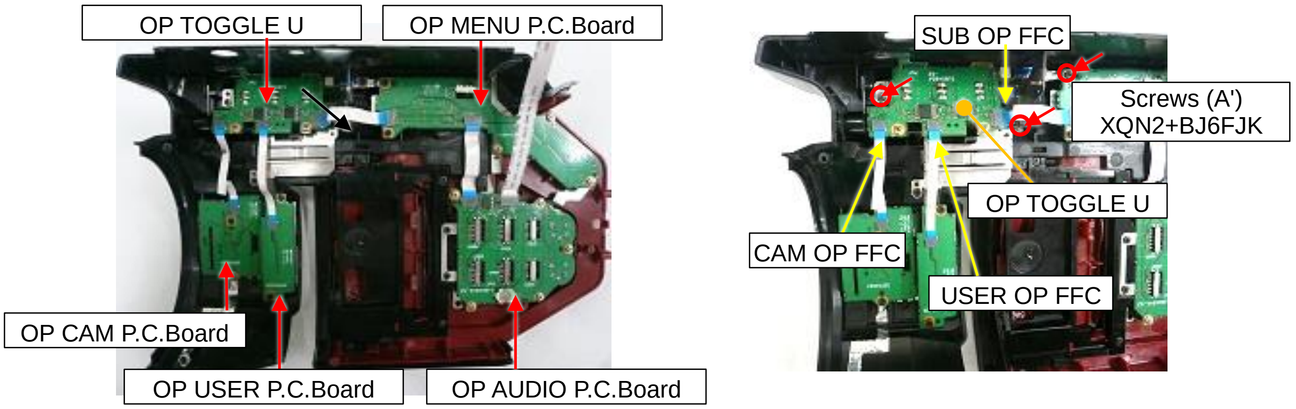


figure 20-1

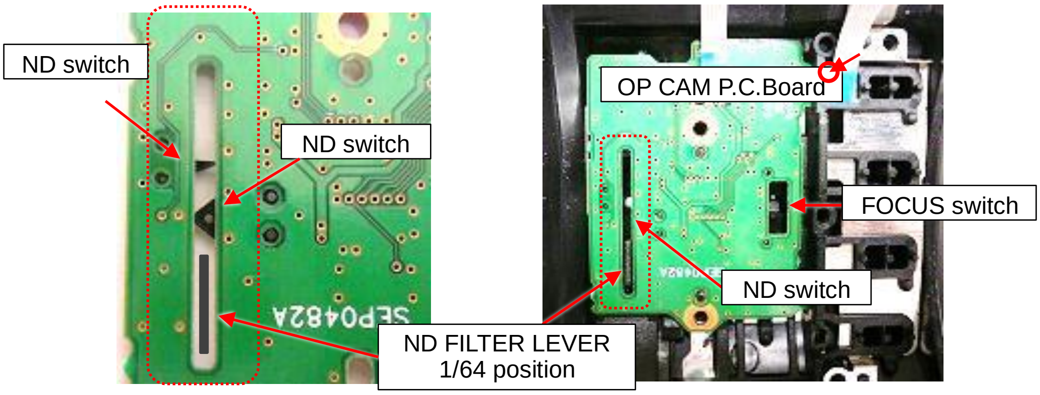


figure 20-1

Note:
When install the OP CAM P.C.Board, please pay attention not to make any damage to the ND SW and set the FOCUS switch to the collect position as shown in figure 20-2.

21. Removal of ZOOM U

1. Remove the GRIP U. (Refer to the item 1.Removal of GRIP U)
2. 2.Disconnect the SUB OP FFC as shown in figure 21-1.
3. Unscrew the 2 screws(D') and remove the ZOOM U as shown in figure 21-1.

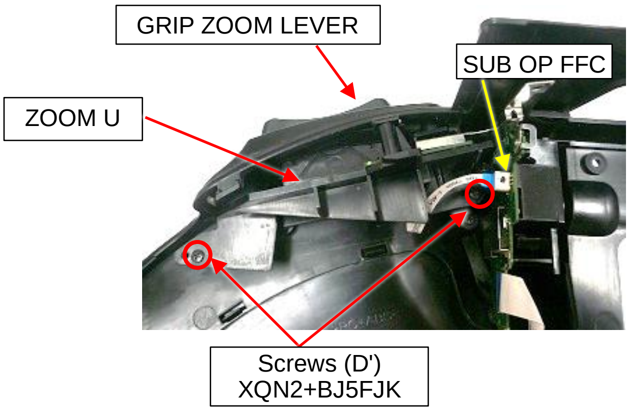


figure 21-1

22. Removal of POWER SS U

1. Remove the ZOOM U. (Refer to the item 21.Removal of ZOOM U)
2. Unscrew the 2 screws(E’) and remove the POWER SS U as shown in figure 21-1.

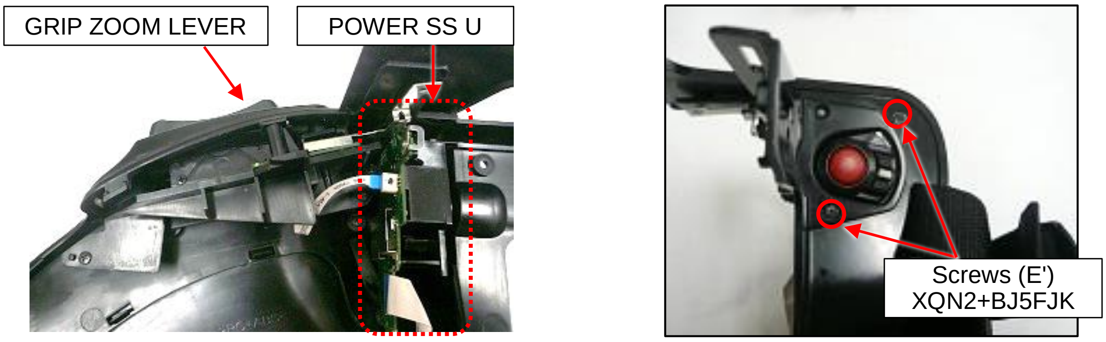


figure 22-1

23. Removal of SUB SS ZOOM P.C.Board

1. Remove the HANDLE CASE T U.(Refer to the item 10.Removal of MIC HOLDER U)
2. Unscrew the 4 screws(F’) and remove the ACCESORRY SHOE as shown in figure 23-1.
3. Unscrew the 3 screws(G’) and remove the HA TOP ANGLE as shown in figure 23-1.
4. Disconnect the SUB SS ZOOM FFC and remove the SUB SS ZOOM P.C.Board as shown in figure 23-1

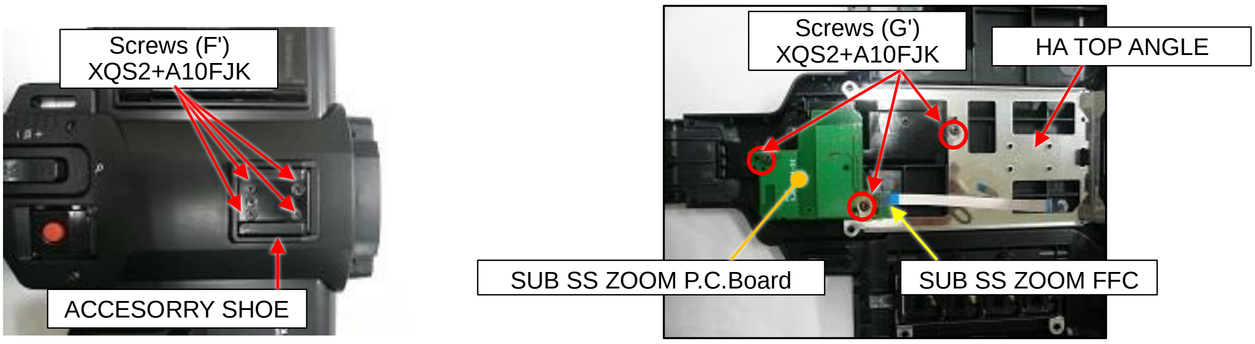


figure 23-1

SECTION 3

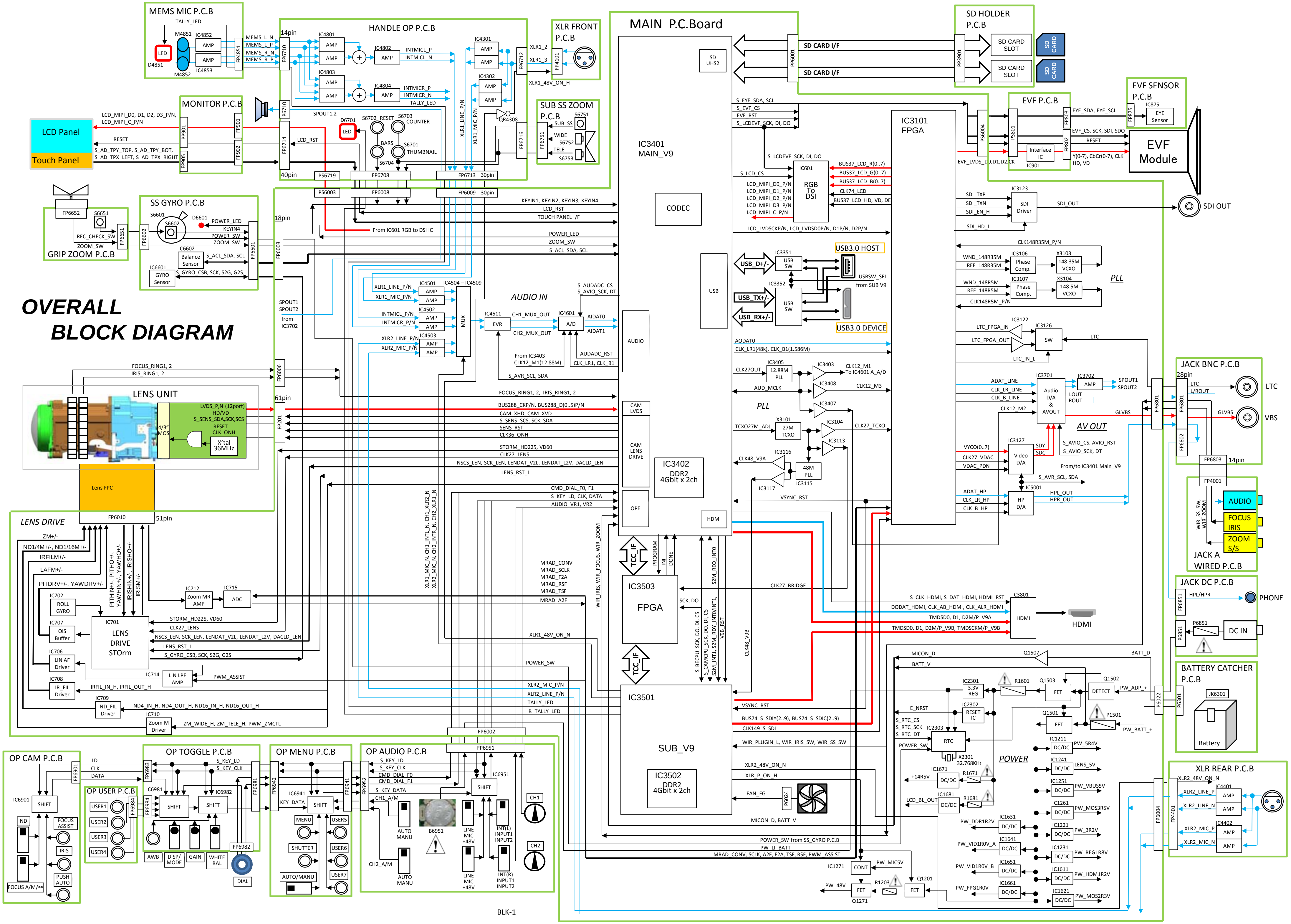
BLOCK DIAGRAMS
ブロック図

品番/Model No. : AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC

CONTENTS

OVERALL BLOCK DIAGRAM... BLK-1

OVERALL BLOCK DIAGRAM

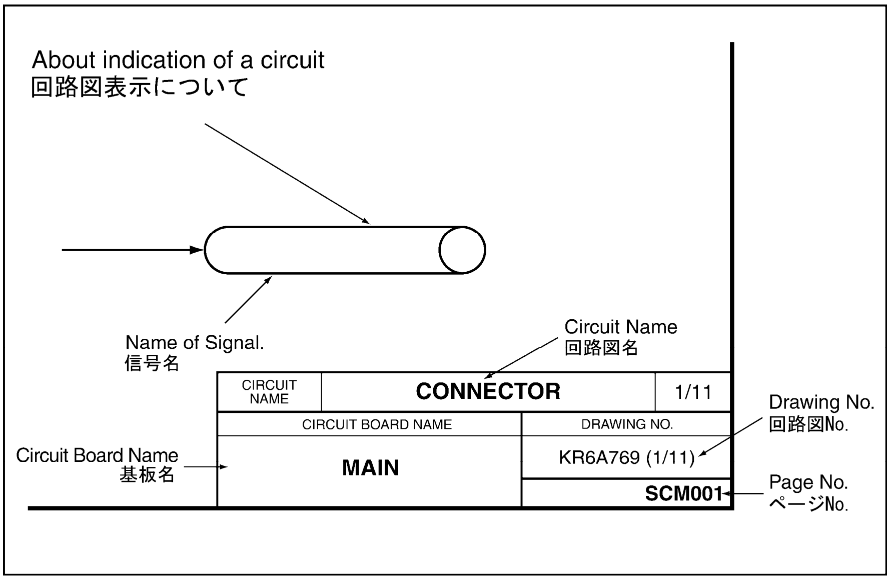


SECTION 4

SCHEMATIC DIAGRAMS

回　路　図

品番/Model No. : AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC



NOTE:
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST SECTION.

CAUTION

THE ▭ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

⚠ 警 告	
⚠ 感電注意	AC100Vの加わっている活電部（充電部、活電部）に直接触れないでください。 ☞ 感電ややけどの可能性があります。

① ⚠ 警 告　⚠ 印の部品は安全上重要な部品です。交換するときは、安全上および性能維持のため必ず指定の部品をご使用ください。
② ▭ 内は充電部です。AC 100Vが加わっておりますので点検、修理のときは感電しないよう充分ご注意ください。
③ 部品交換時には、電源プラグをぬいてから行ってください。
④ 一次側（充電部）の電圧・波形は、一次側アースを基準に測定してください。
⑤ 部品品番は、部品リストで確認の上交換ください。

CONTENTS

MAIN

MAIN_CN (1/1) SCM001
VIDEO_A (1/1) SCM002
VIDEO_B (1/1) SCM003
HDMI (1/1) SCM004
SD_UHS (1/1) SCM005
USB (1/1) SCM006
FPGA (1/1) SCM007
LCD (1/1) SCM008
AV_OUT (1/1) SCM009
AUDIO_MUX (1/1) SCM010
AUDIO_ADC (1/1) SCM011
HEADPHONE_AMP (1/1) SCM012
DCIN_RTC (1/1) SCM013
POWER_A (1/1) SCM014
POWER_B (1/1) SCM015
MOS_CN (1/1) SCM016
LENSDRIVE (1/1) SCM017

EVF

EVF (1/1) SCM018

SD_HOLDER

SD_HOLDER (1/1) SCM019

JACK_A_WIRED

JACK_A_WIRED (1/1) SCM020

JACK_BNC

JACK_BNC (1/1) SCM021

JACK_DC

JACK_DC (1/1) SCM022

XLR_REAR

XLR2(REAR) (1/1) SCM023
XLR_AMP2(REAR) (1/1) SCM024

XLR_FRONT

XLR_FRONT (1/1) SCM025

HANDLE_OP

MIC (1/1) SCM026
XLR_AMP1(FRONT) (1/1) SCM027
HANDLE_OP (1/1) SCM028

MEMS_MIC

MEMS_MIC (1/1) SCM029

MONITOR

MONITOR (1/1) SCM030

BATT_CATCHER

BATT_CATCHER (1/1) SCM031

OP_CAM

OP_CAM (1/1) SCM032

OP_USER

OP_USER (1/1) SCM033

OP_MENU

OP_MENU (1/1) SCM034

OP_AUDIO

OP_AUDIO (1/1) SCM035

OP_TOGGLE

OP_TOGGLE (1/1) SCM036

SS_GYRO

SS_GYRO (1/1) SCM037

GRIP_ZOOM

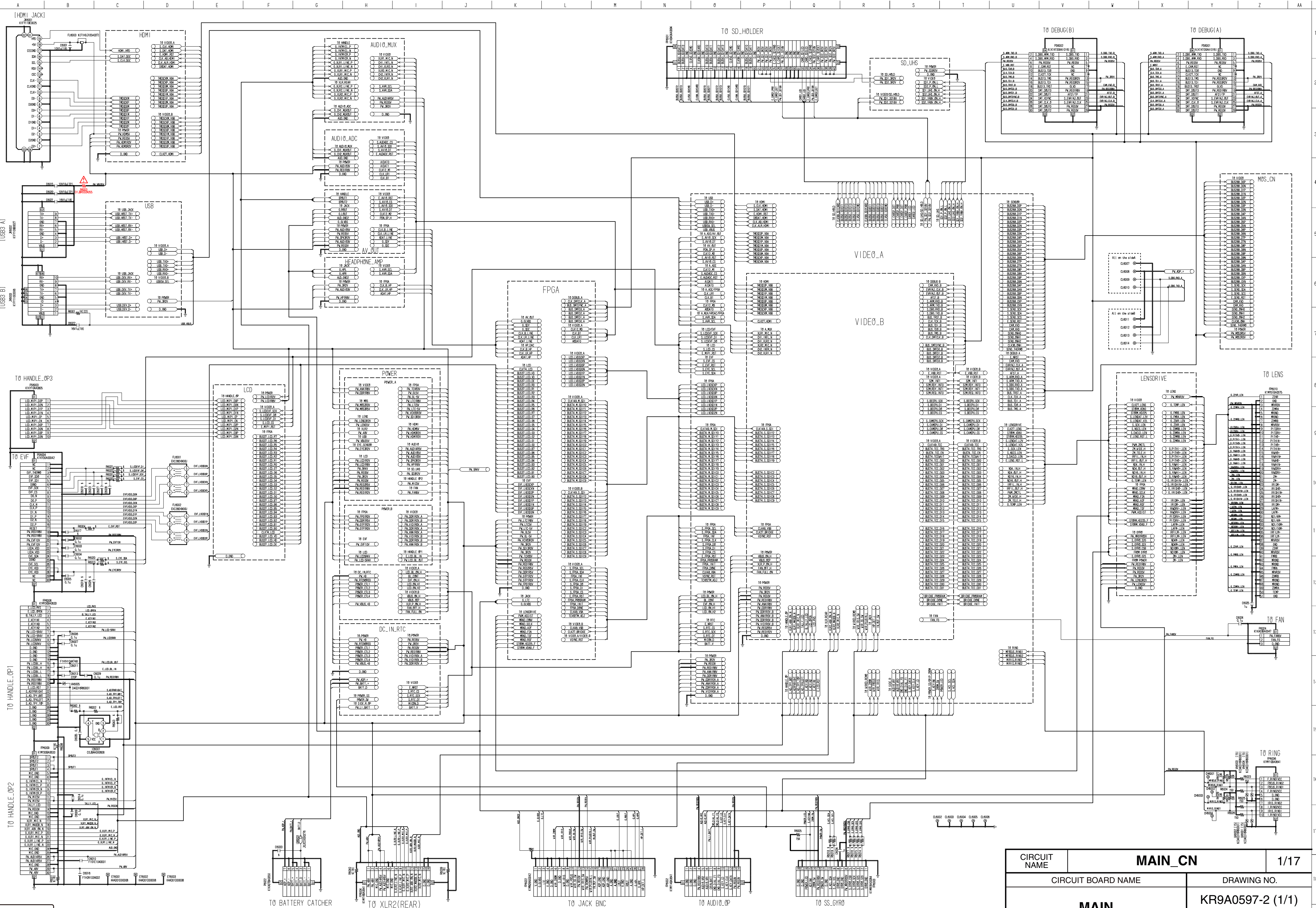
GRIP_ZOOM (1/1) SCM038

EYE_SENSOR

EYE_SENSOR (1/1) SCM039

SUB_SS_ZOOM

SUB_SS_ZOOM (1/1) SCM040

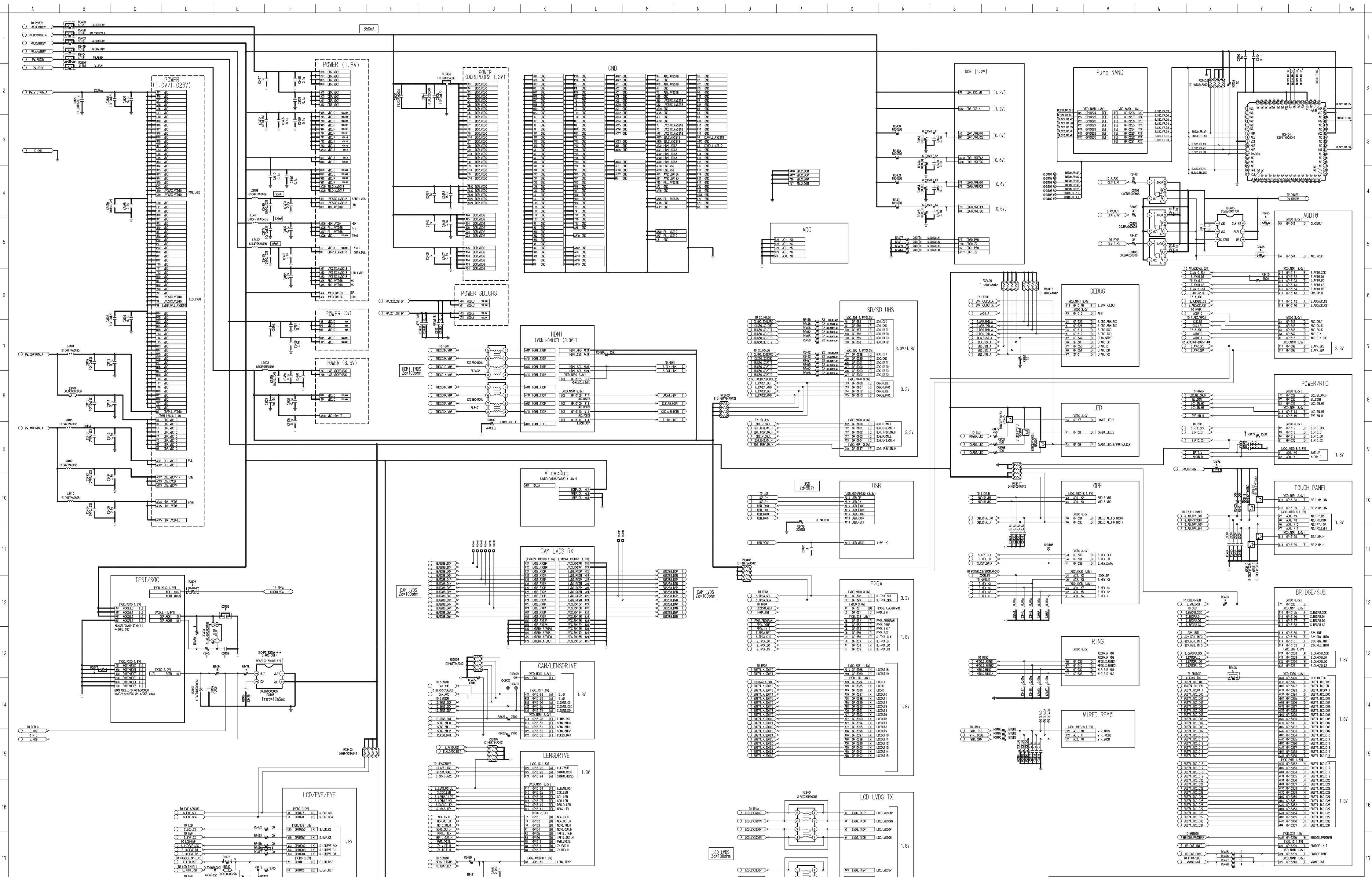


CIRCUIT NAME	MAIN_CN	1/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR9A0597-2 (1/1)
		SCM001

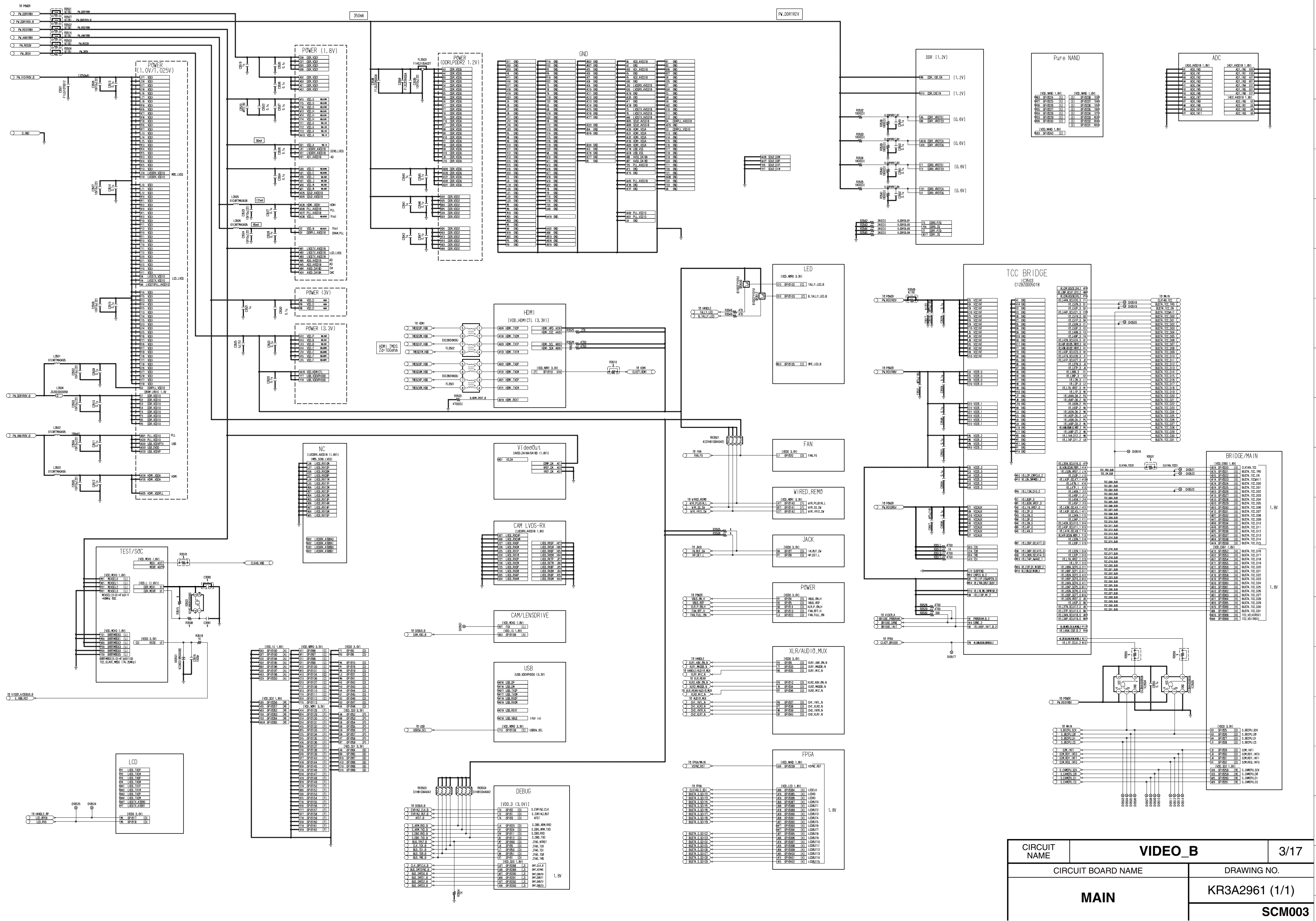
⚠ 警告

⚠印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。

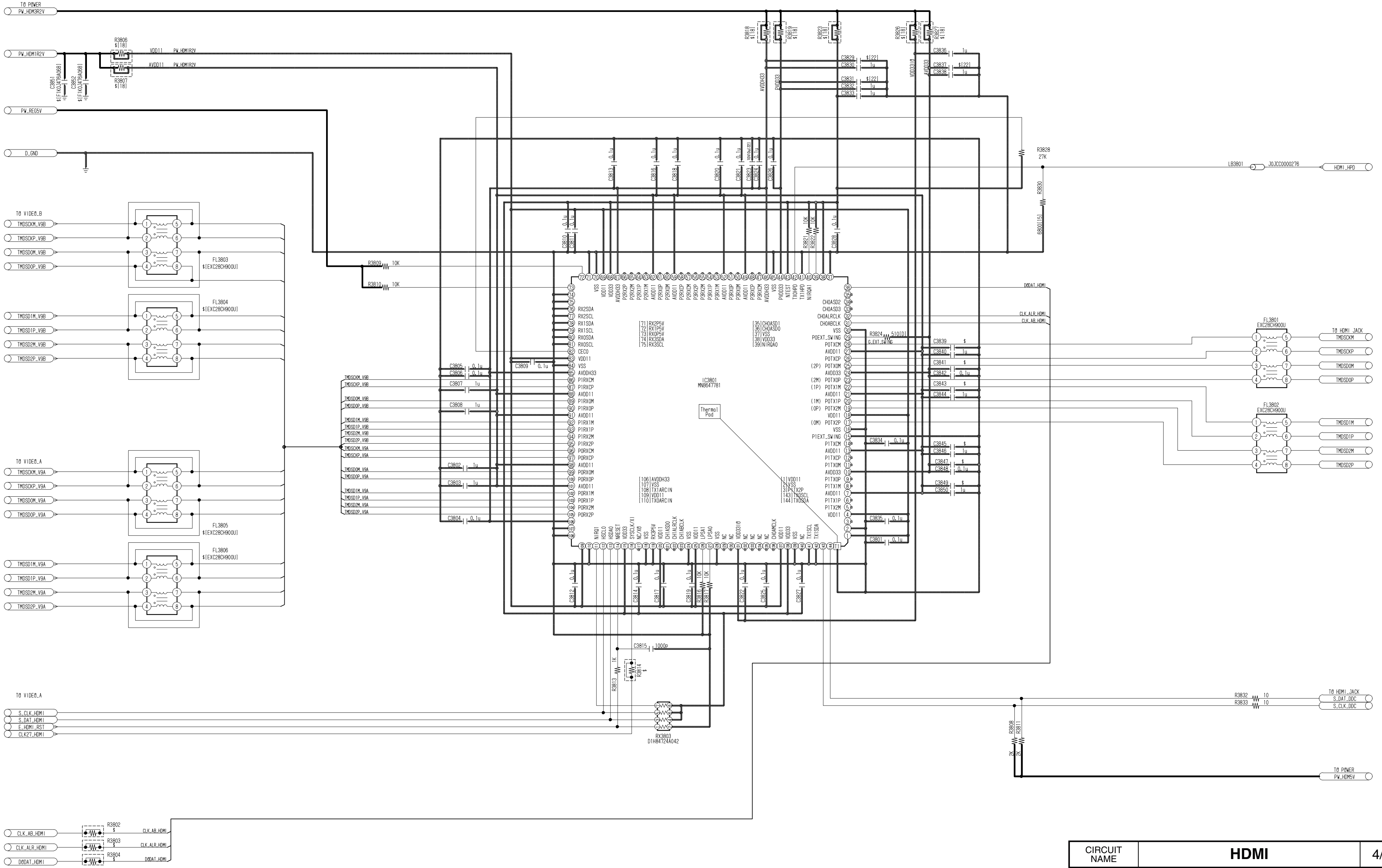
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.



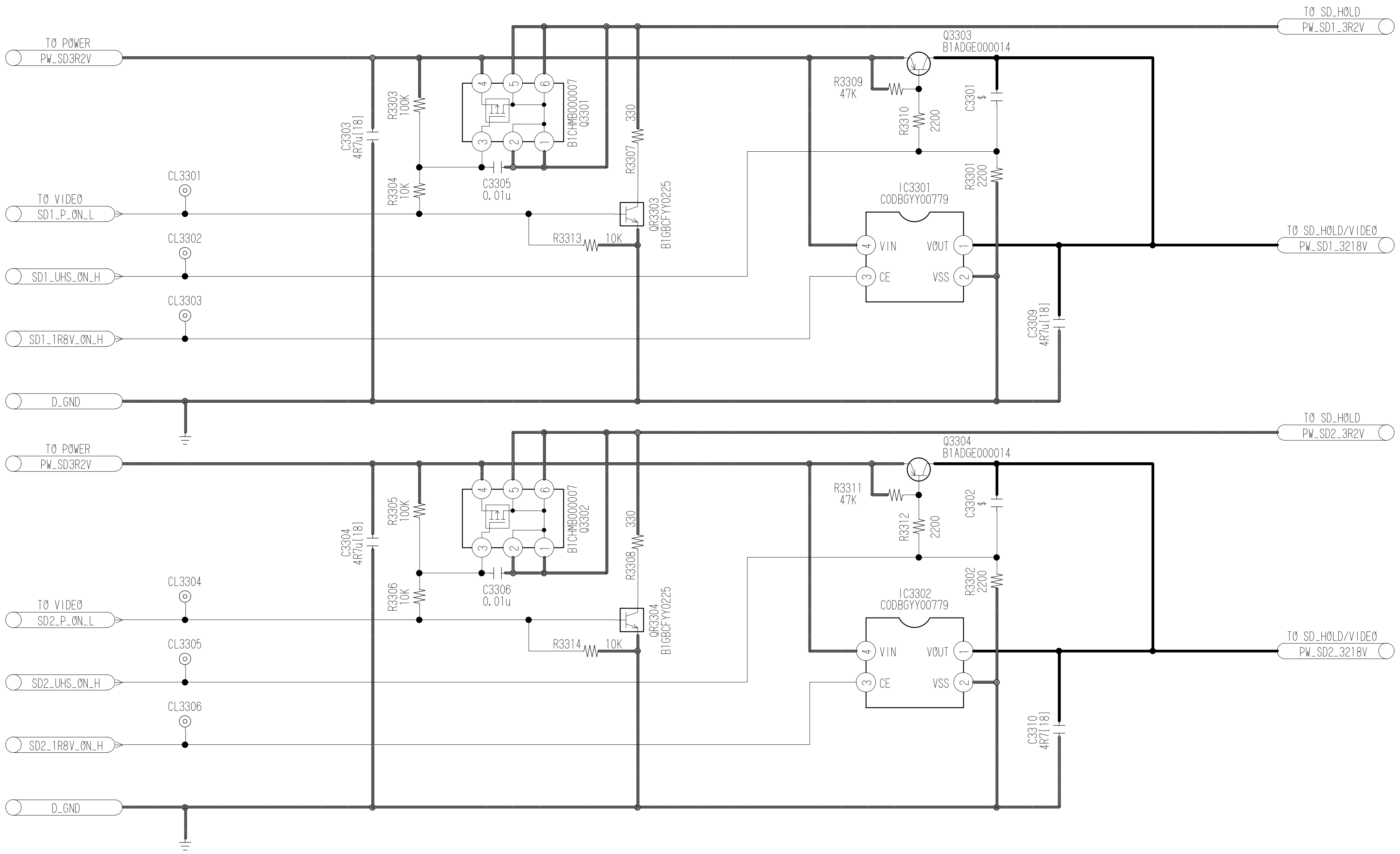
CIRCUIT NAME	VIDEO_A	2/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR3A2960 (1/1)
		SCM002



CIRCUIT NAME	VIDEO_B	3/17
CIRCUIT BOARD NAME	DRAWING NO.	
MAIN	KR3A2961 (1/1)	
	SCM003	

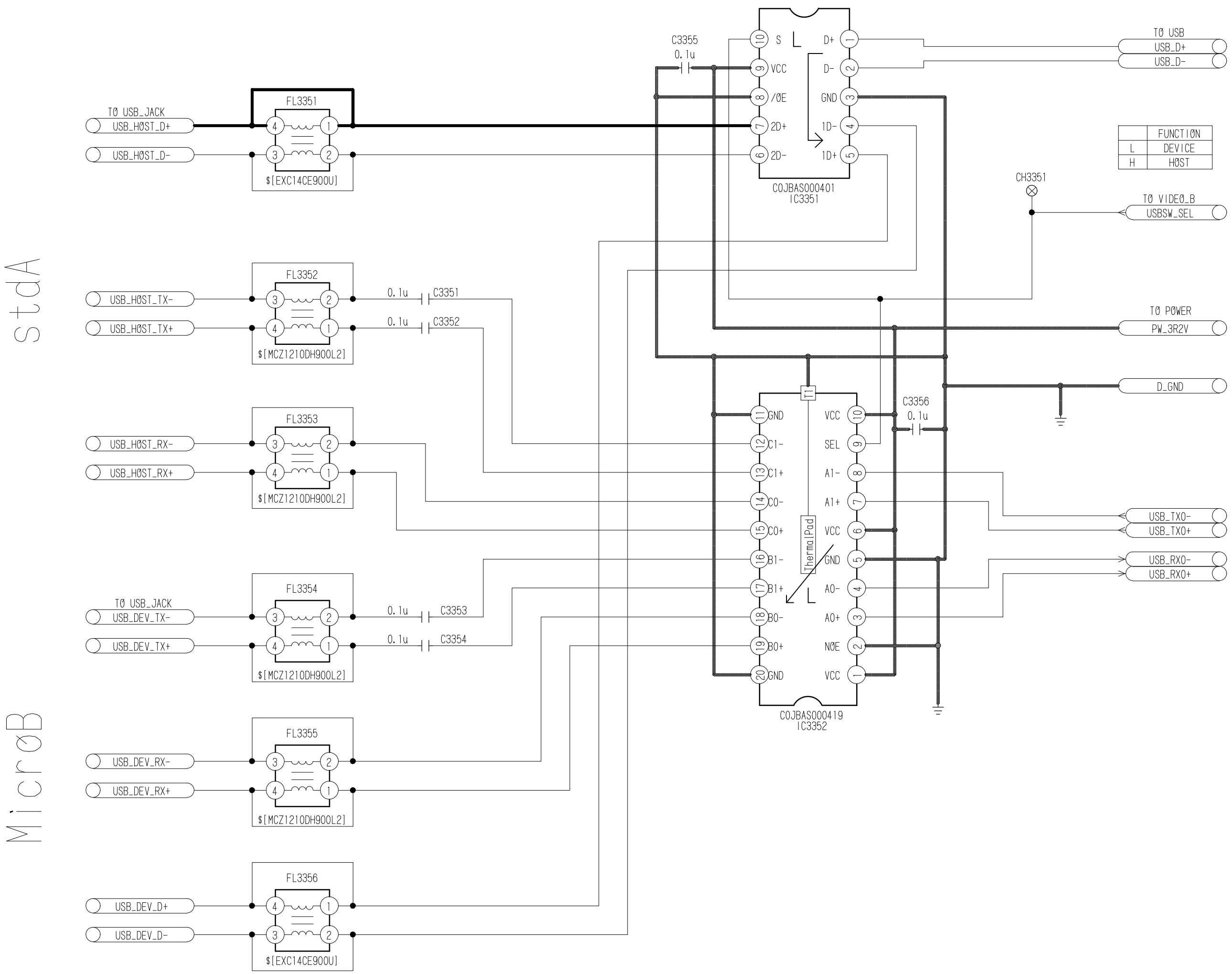


CIRCUIT NAME	HDMI	4/17
CIRCUIT BOARD NAME	DRAWING NO.	
MAIN	KR3A2962 (1/1)	
	SCM004	



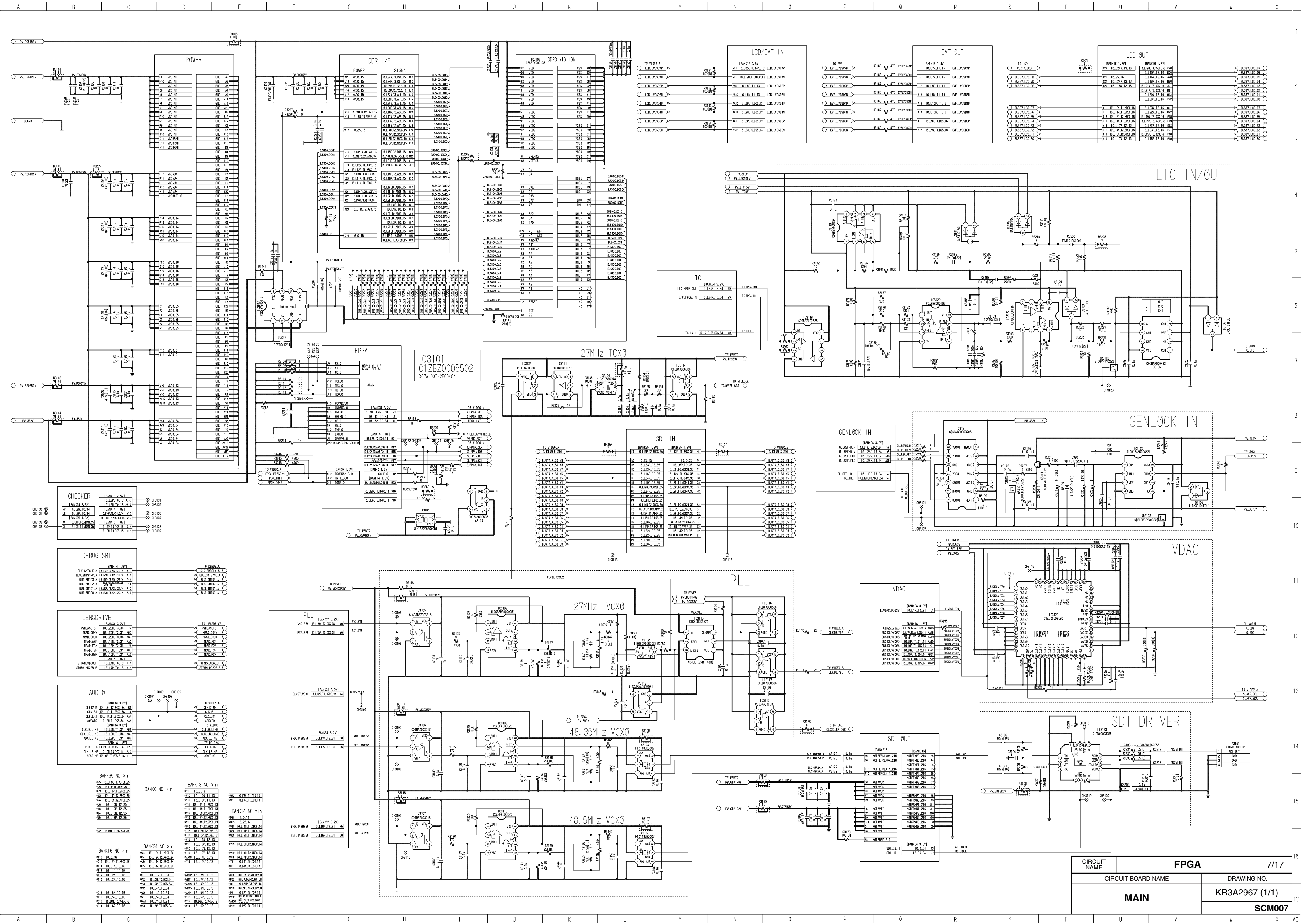
CIRCUIT NAME	SD_UHS	5/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR3A2963 (1/1)
		SCM005

A3

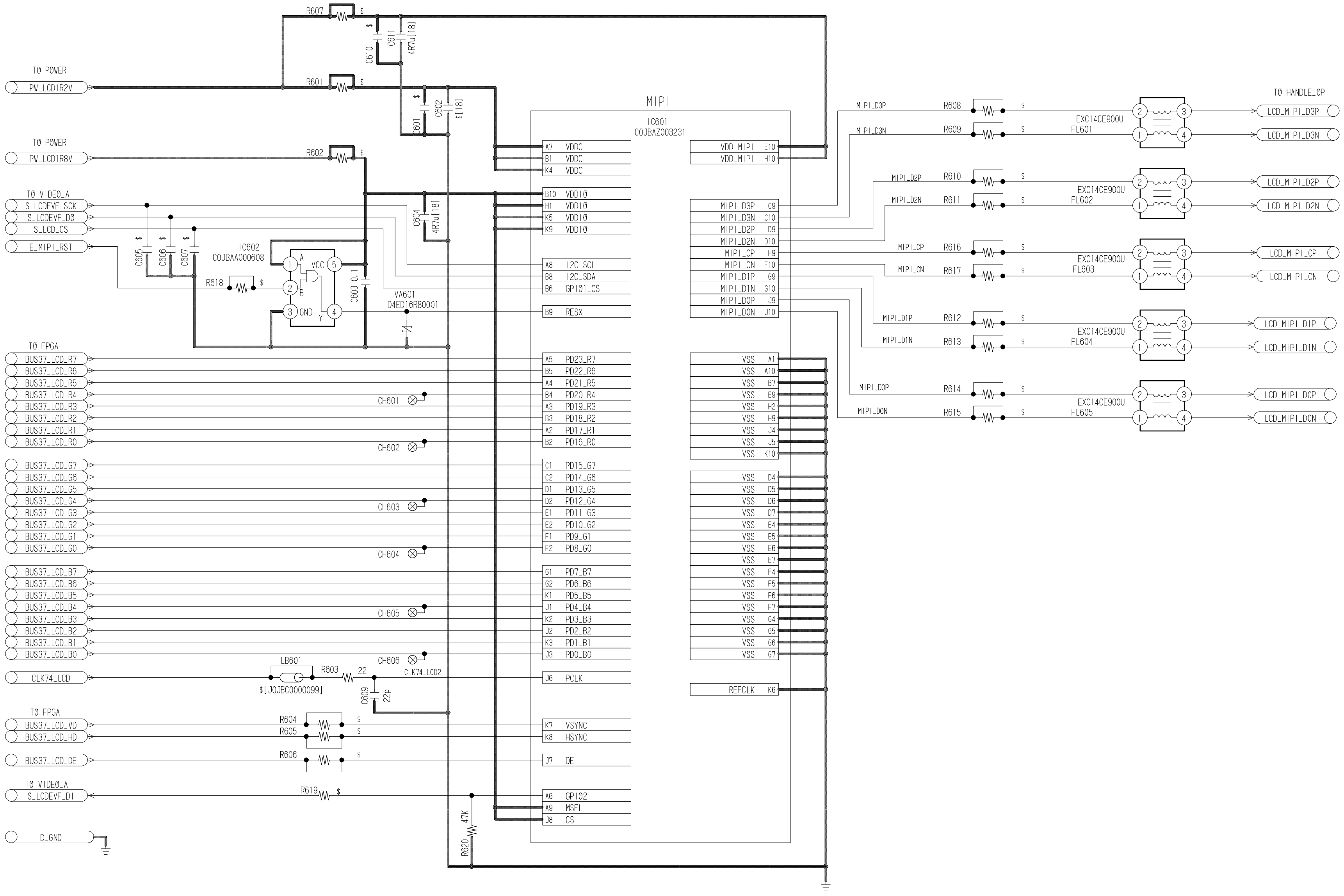


	FUNCTIØN
L	DEVICE
H	HØST

CIRCUIT NAME	USB		6/17
CIRCUIT BOARD NAME		DRAWING NO.	
MAIN		KR3A2964 (1/1)	
		SCM006	



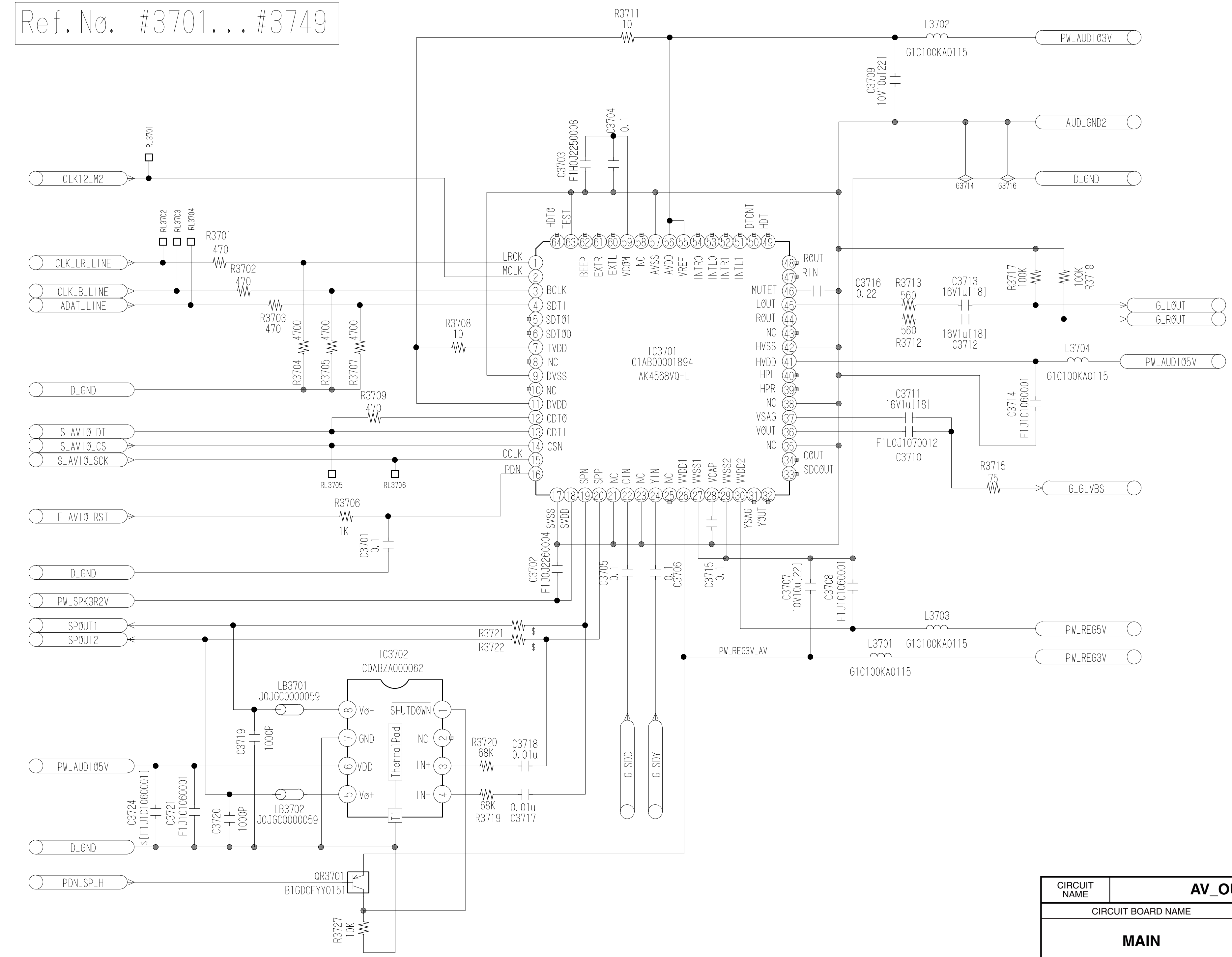
CIRCUIT NAME	FPGA	7/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR3A2967 (1/1)
		SCM007



CIRCUIT NAME	LCD		8/17
CIRCUIT BOARD NAME		DRAWING NO.	
MAIN		KR3A2966 (1/1)	
		SCM008	

A2

Ref. No. #3701...#3749



CIRCUIT NAME **AV_OUT** 9/17

CIRCUIT BOARD NAME

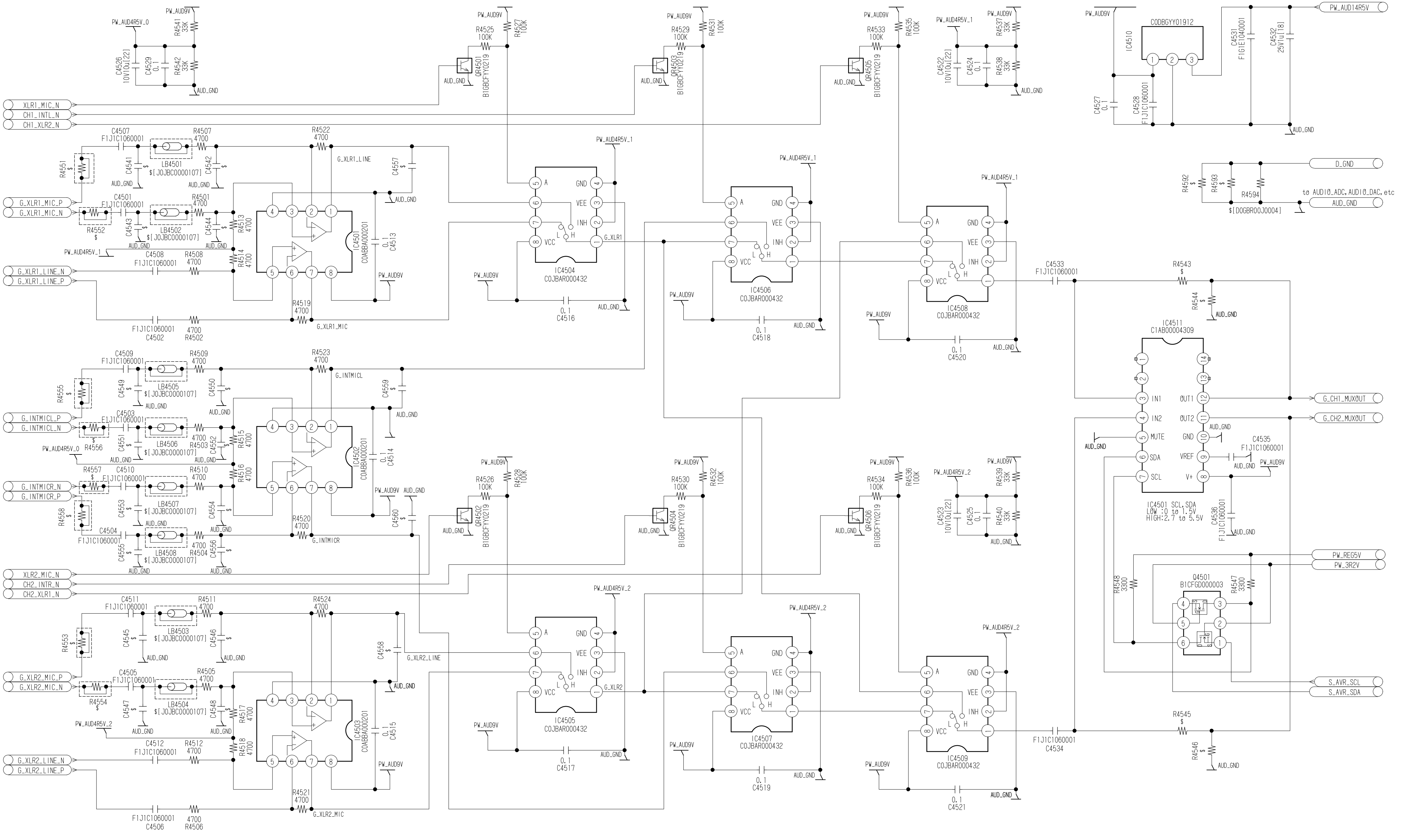
MAIN

DRAWING NO.

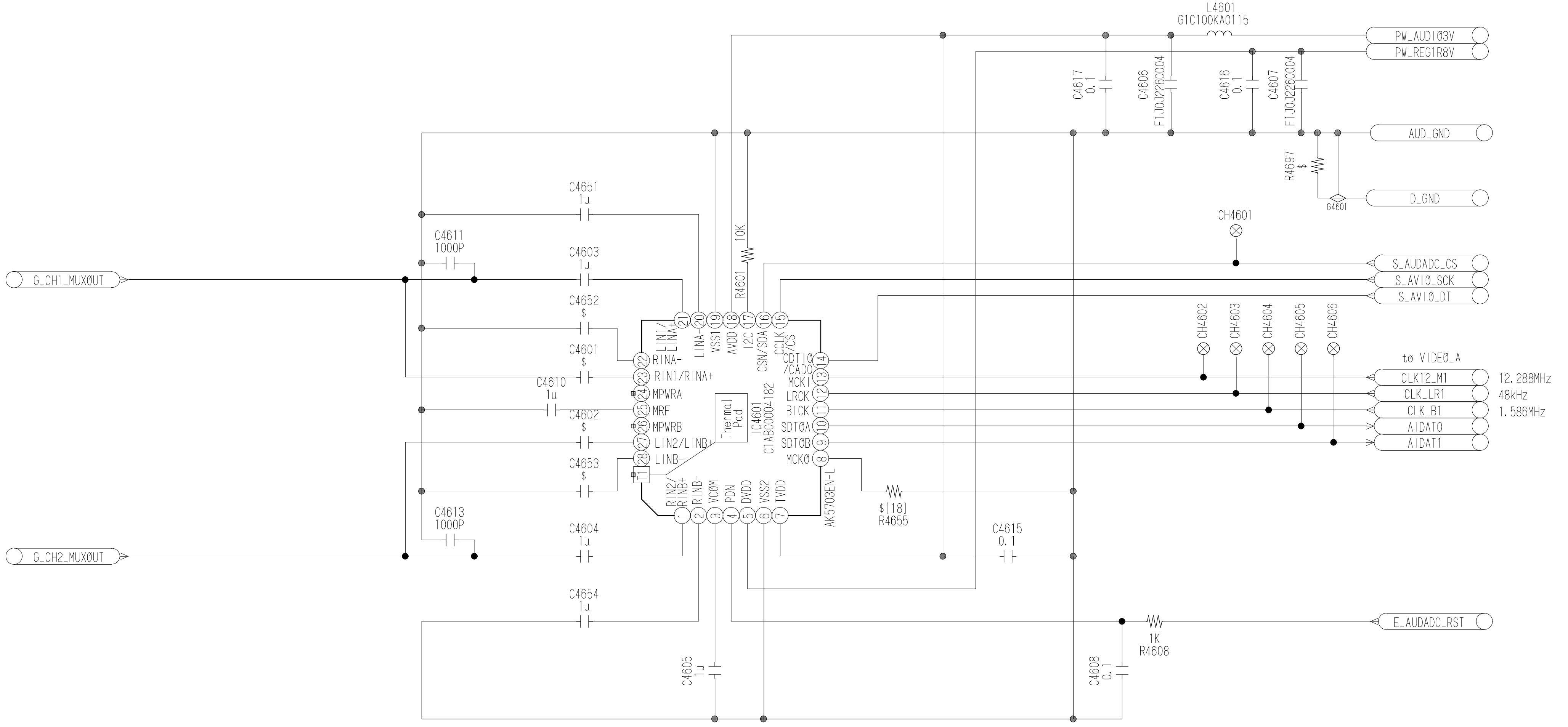
KR3A2985-7 (1/1)

SCM009

A3

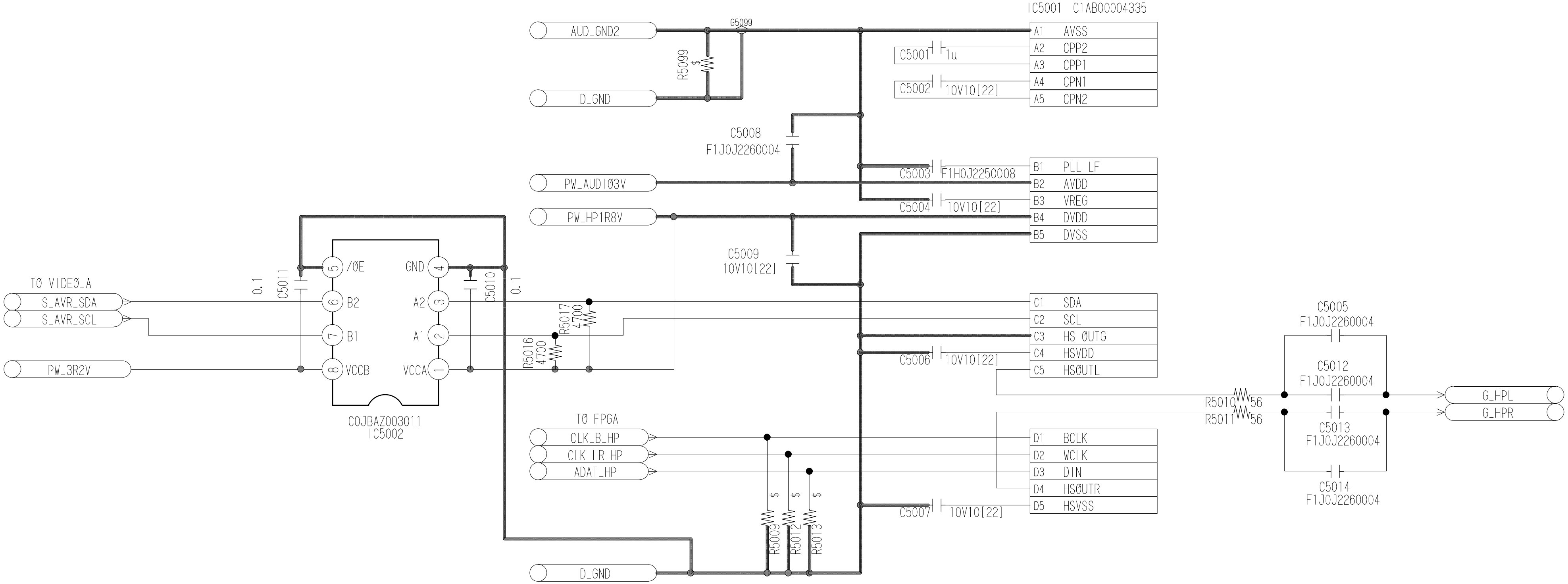


CIRCUIT NAME	**AUDIO_MUX**	10/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR4A0769-8 (1/1)
		SCM010



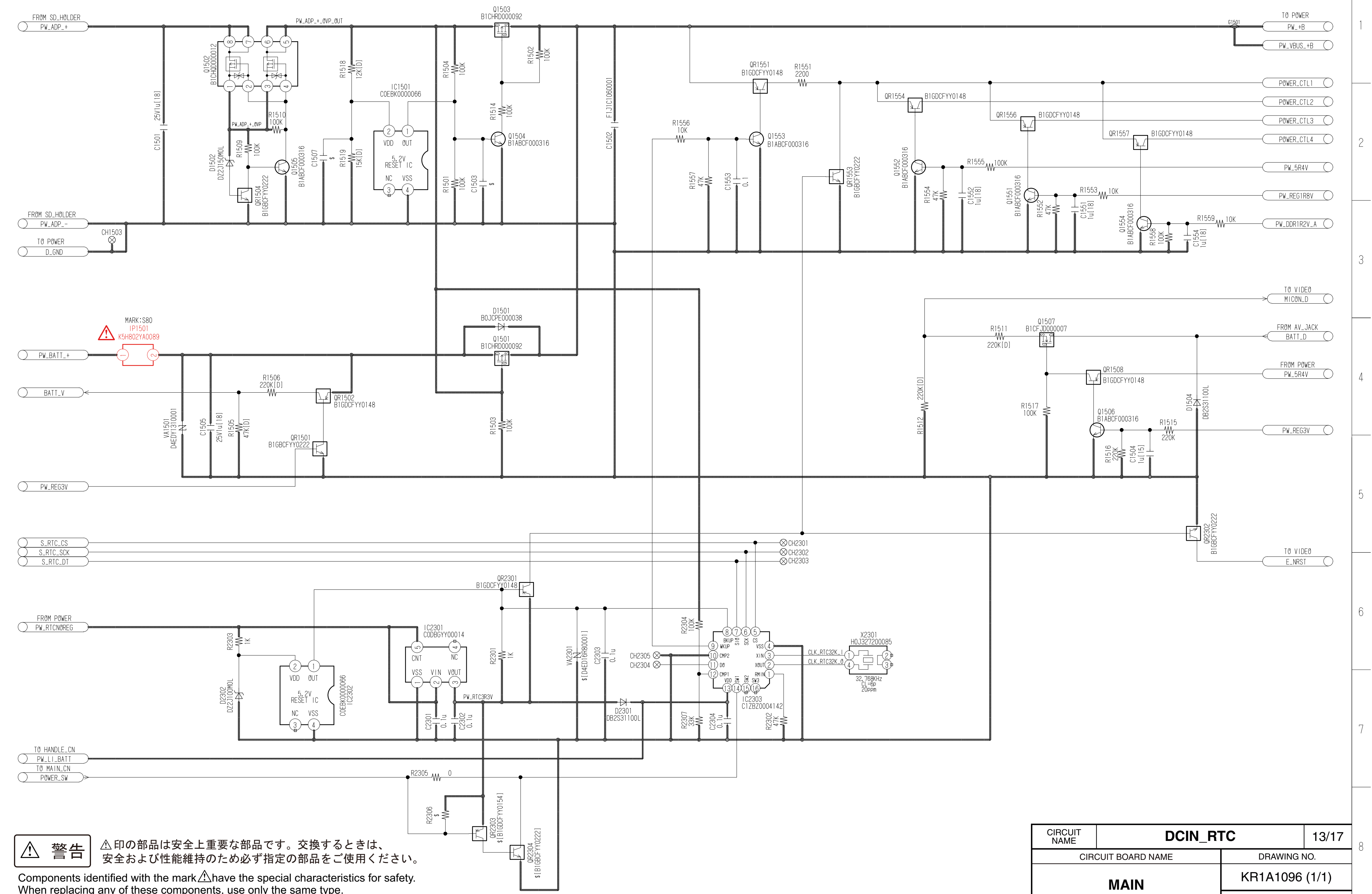
CIRCUIT NAME	AUDIO_ADC	11/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR4A0770-3 (1/1)
		SCM011

A3



CIRCUIT NAME	HEADPHONE_AMP	12/17
CIRCUIT BOARD NAME	DRAWING NO.	
MAIN	KR4A0774-5 (1/1)	
	SCM012	

A3

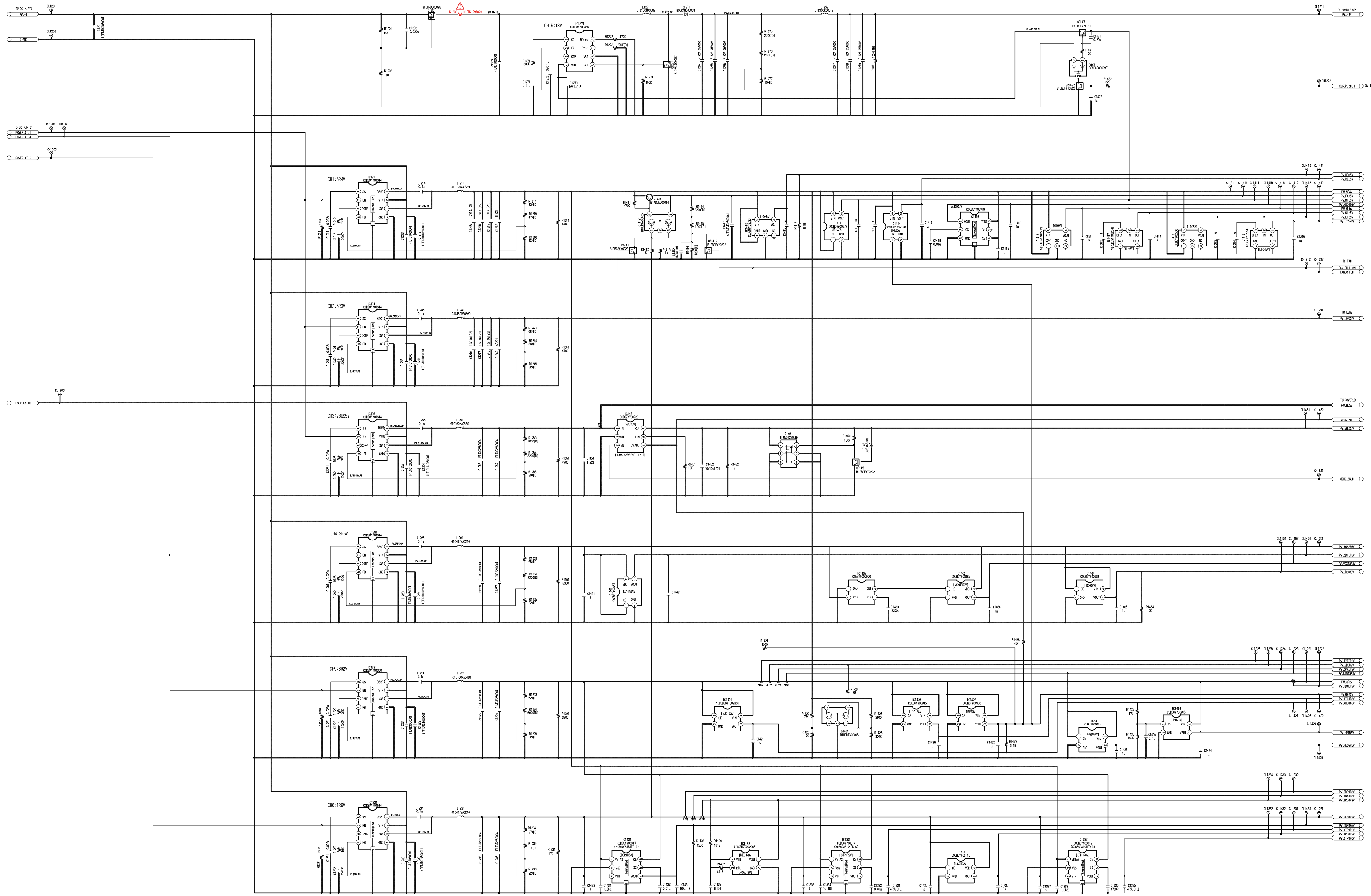


⚠ 警告

⚠印の部品は安全上重要な部品です。交換するときは、
安全および性能維持のため必ず指定の部品をご使用ください。

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

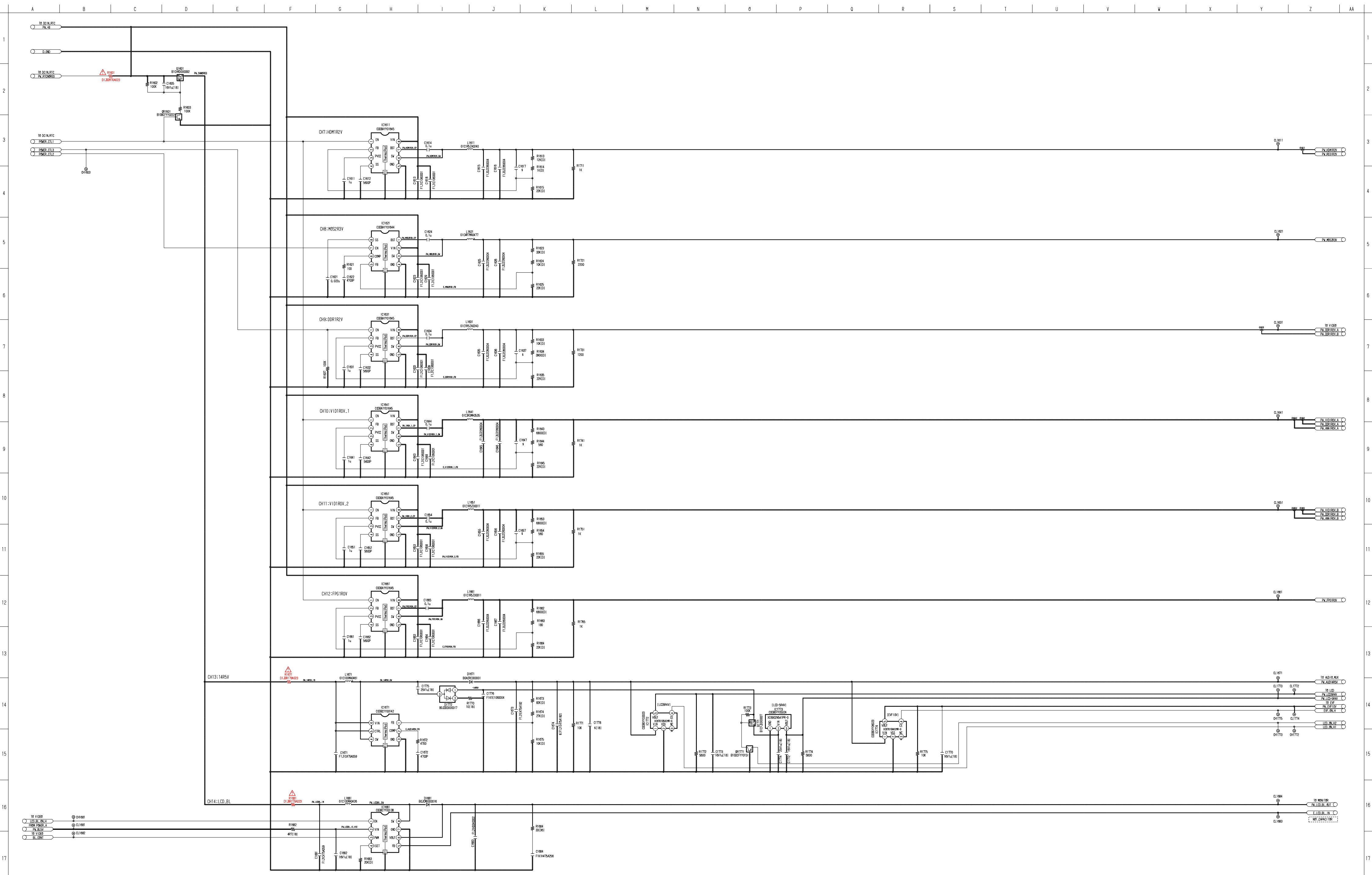
CIRCUIT NAME	DCIN_RTC	13/17
CIRCUIT BOARD NAME	DRAWING NO.	
MAIN	KR1A1096 (1/1) SCM013	



⚠ 警告 ⚠印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

CIRCUIT NAME	POWER_A	14/17
CIRCUIT BOARD NAME	DRAWING NO.	
MAIN	KR1A1097 (1/1)	
	SCM014	

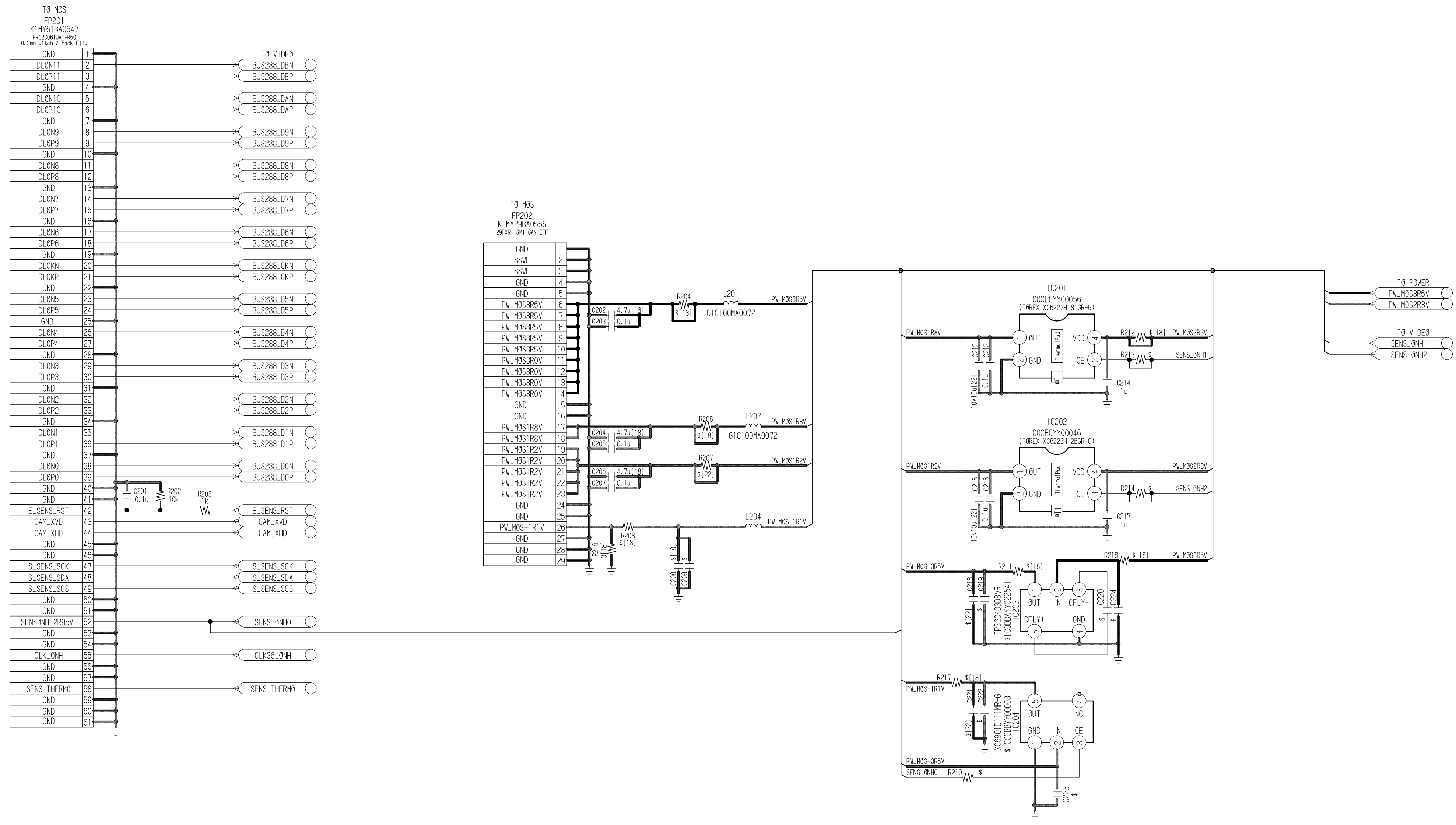


△　警告

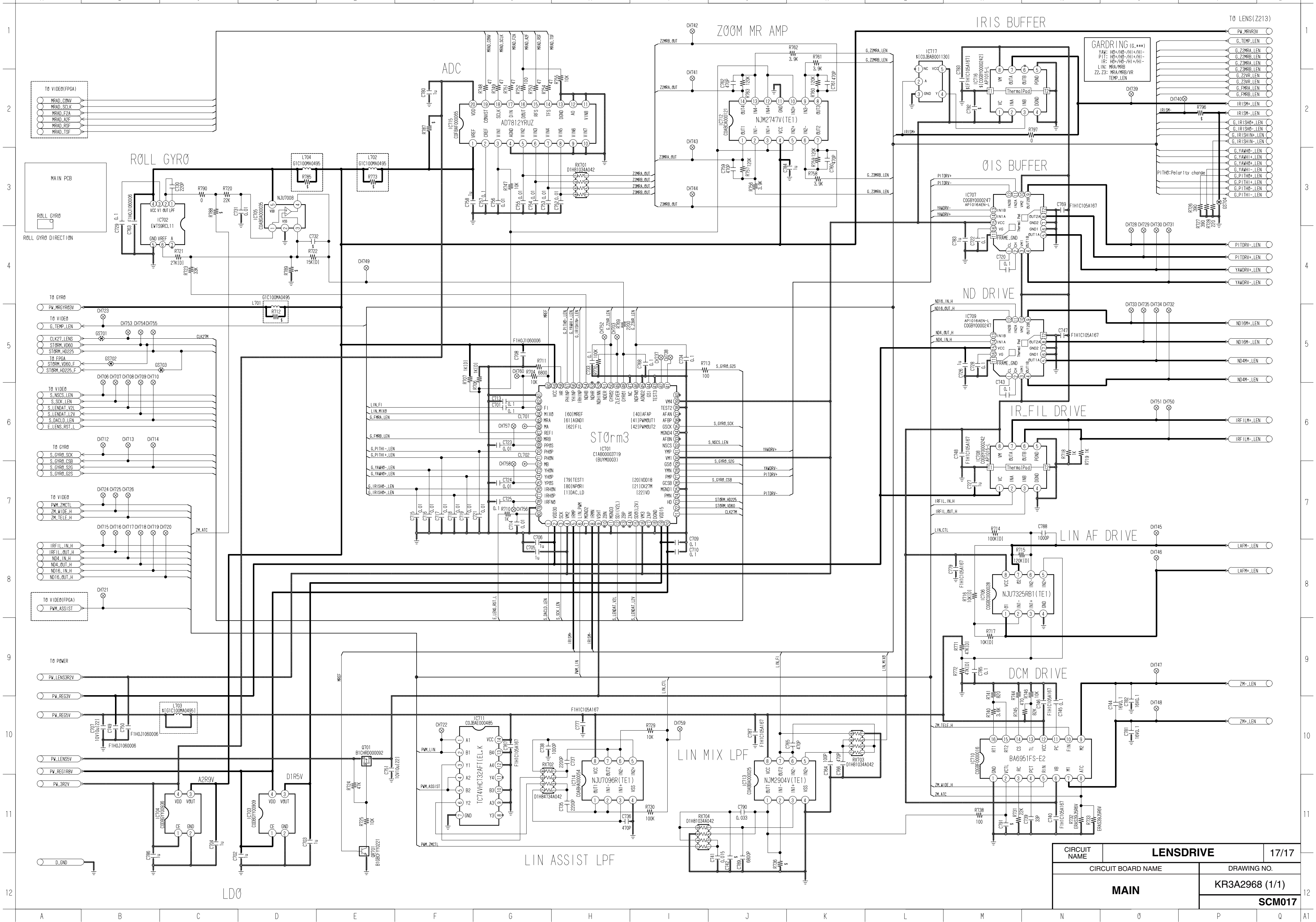
△印の部品は安全上重要な部品です。交換するときは、
安全および性能維持のため必ず指定の部品をご使用ください。

Components identified with the mark △ have the special characteristics for safety.
When replacing any of these components, use only the same type.

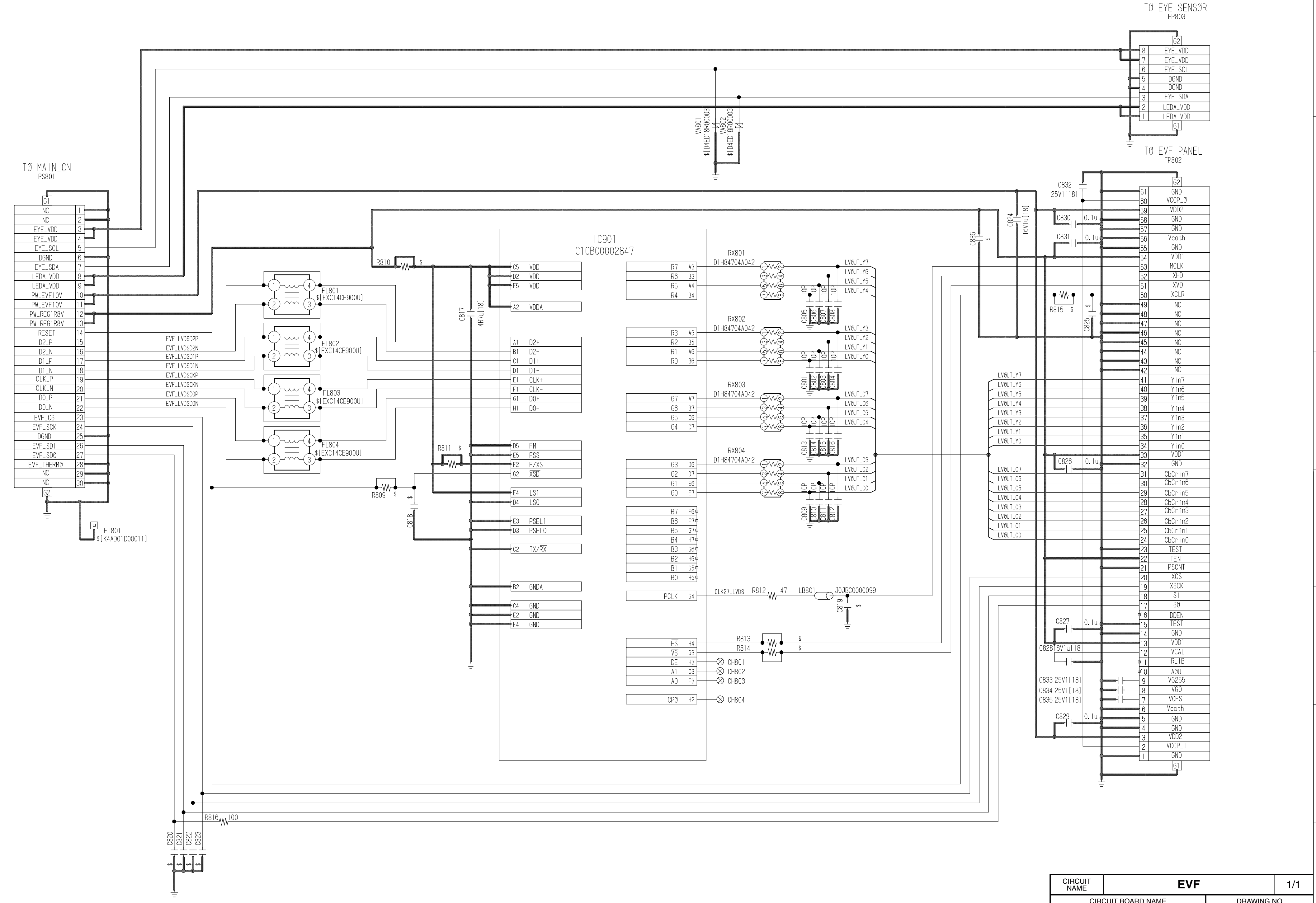
CIRCUIT NAME	POWER_B	15/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR1A1098 (1/1)
		SCM015



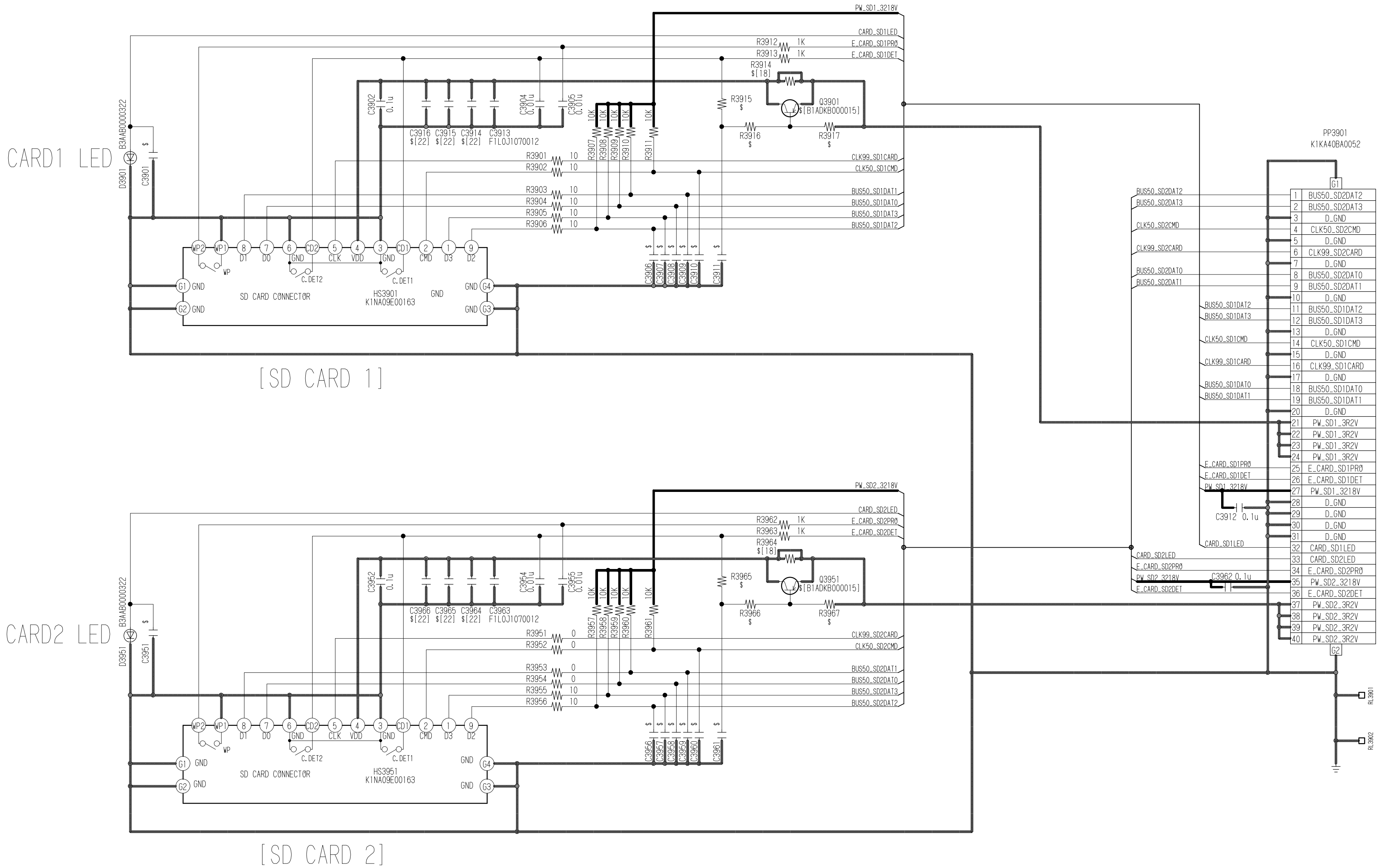
CIRCUIT NAME	MOS_CN		16/17
CIRCUIT BOARD NAME		DRAWING NO.	
MAIN		KR3A2969 (1/1)	
		SCM016	



CIRCUIT NAME	LENSDRIVE	17/17
CIRCUIT BOARD NAME		DRAWING NO.
MAIN		KR3A2968 (1/1)
		SCM017

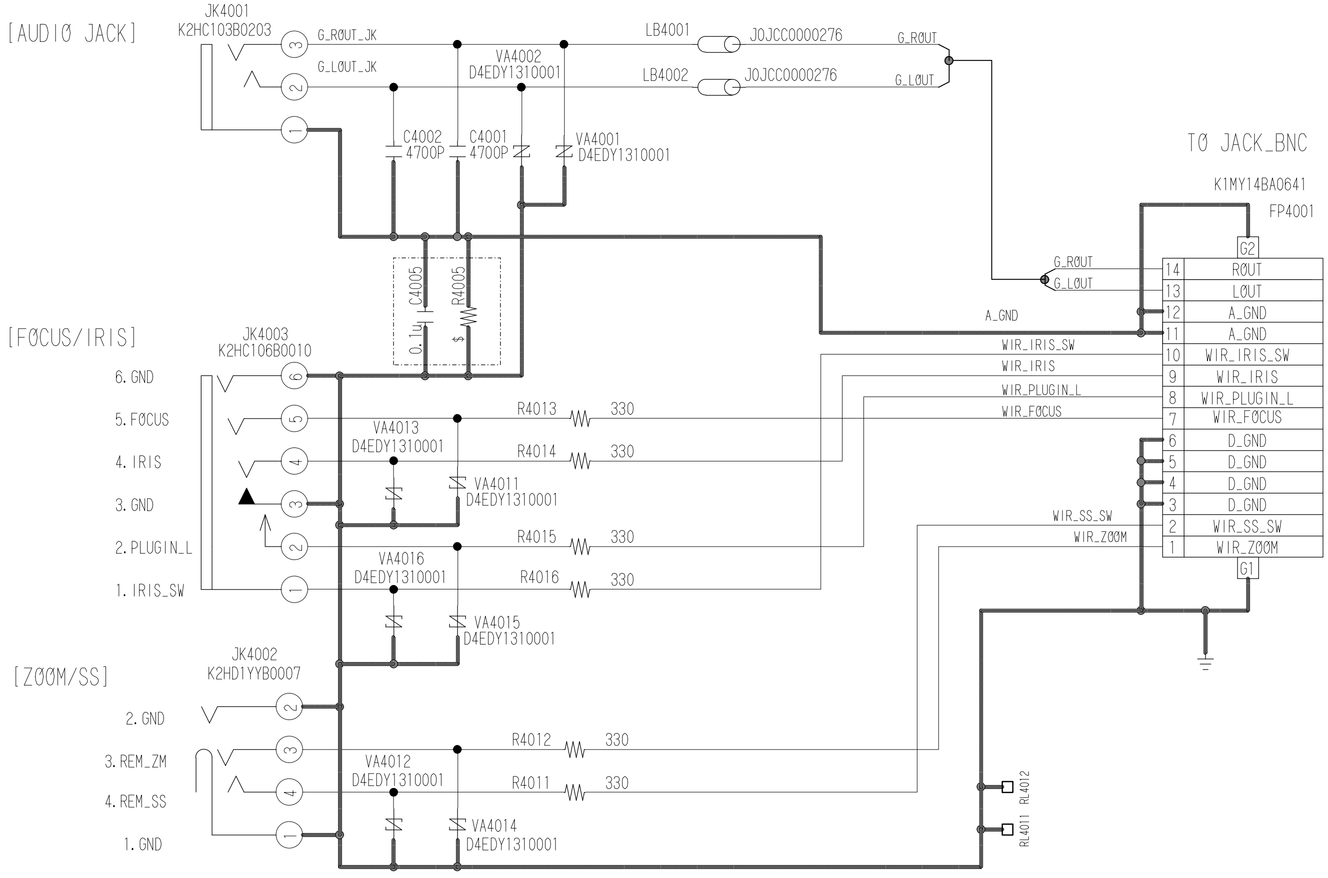


CIRCUIT NAME	EVF	1/1
CIRCUIT BOARD NAME		DRAWING NO.
EVF		KR3A2970 (1/1)
		SCM018



CIRCUIT NAME	**SD_HOLDER**	1/1
CIRCUIT BOARD NAME		DRAWING NO.
SD_HOLDER		KR3A2972 (1/1)
		SCM019

A2



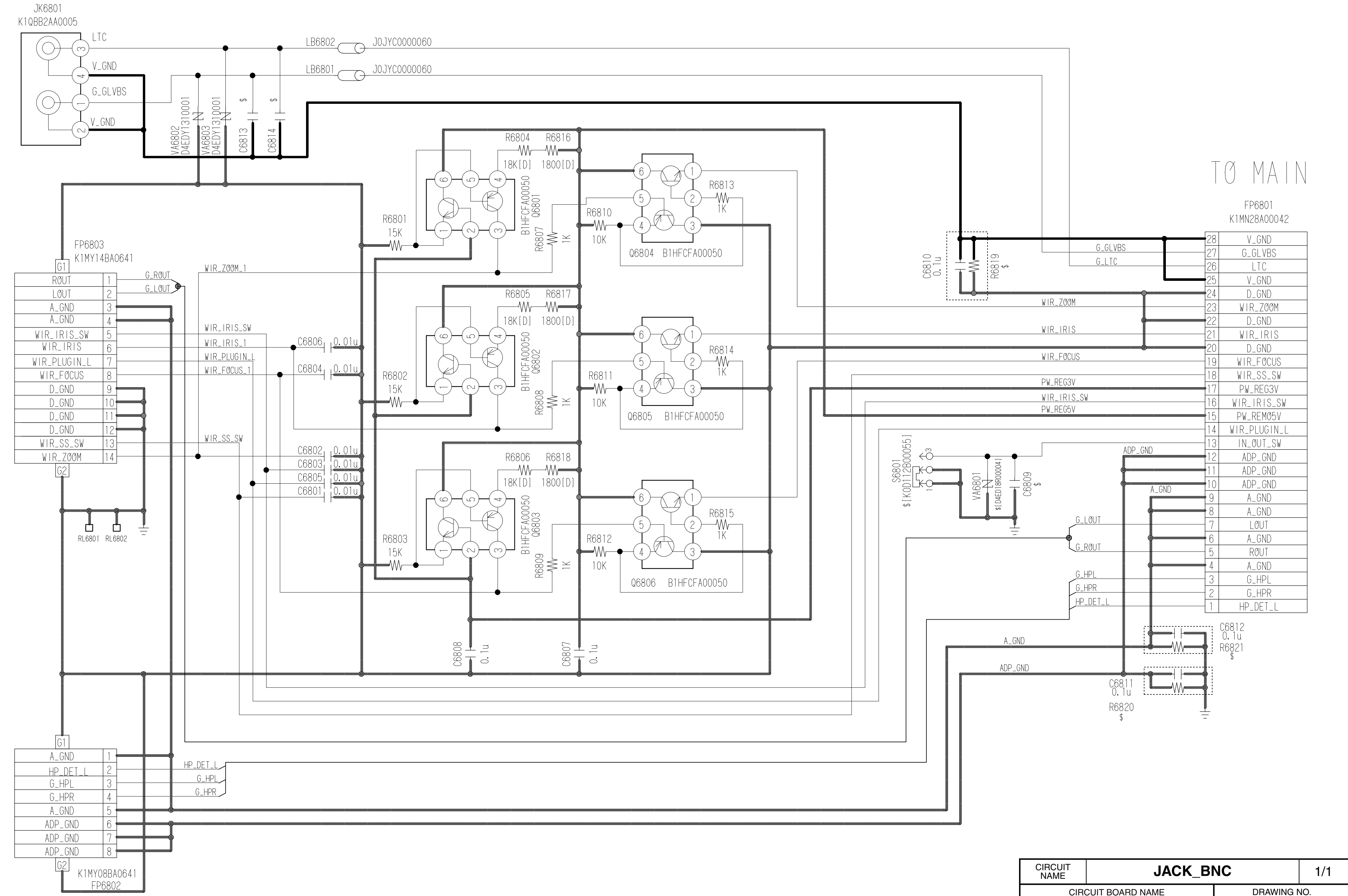
CIRCUIT NAME: **JACK_A_WIRED** 1/1

CIRCUIT BOARD NAME: **JACK_A_WIRED**

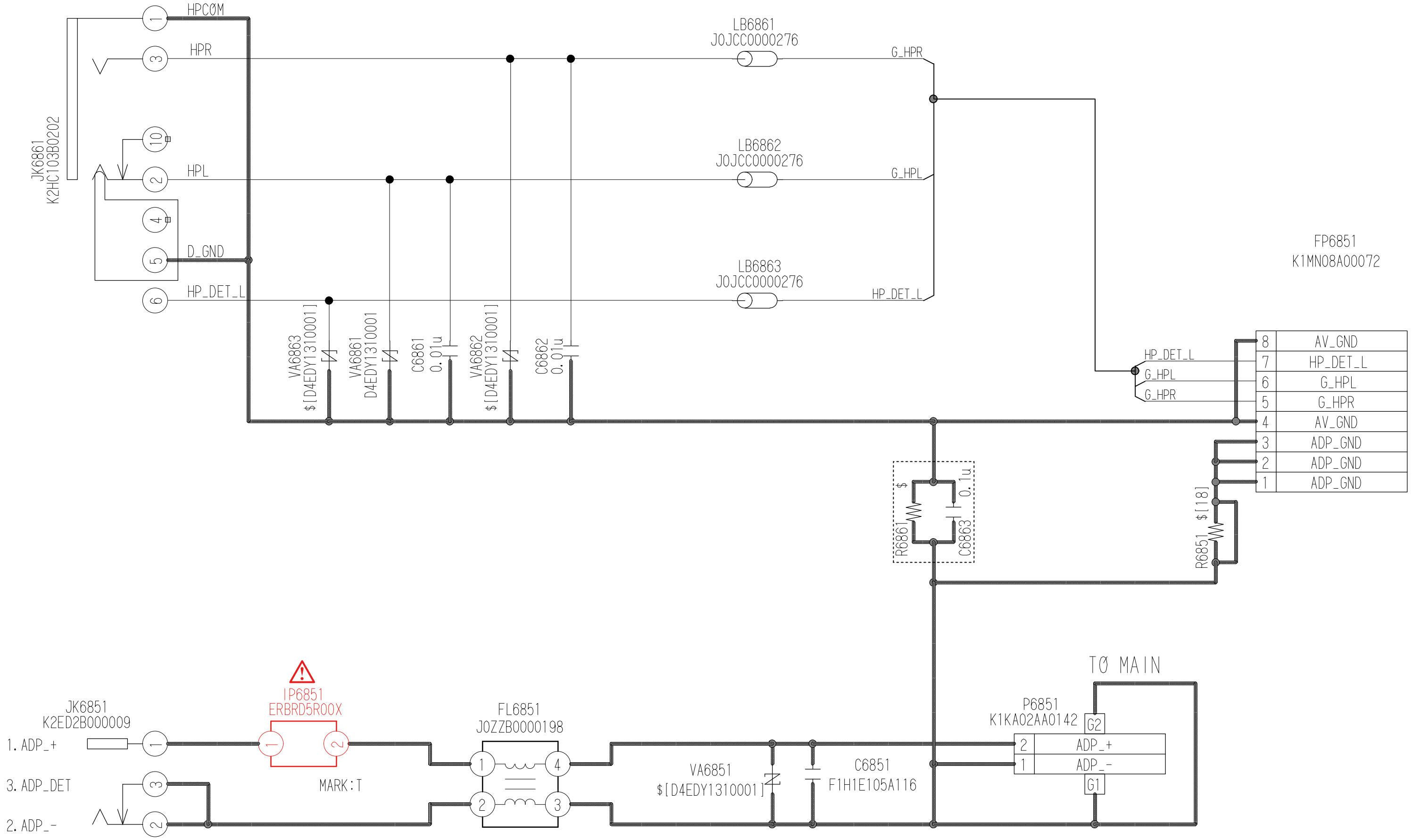
DRAWING NO.: KR4A0776 (1/1)

SCM020

A3



CIRCUIT NAME	JACK_BNC	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
JACK_BNC	KR3A2984 (1/1)	
	SCM021	

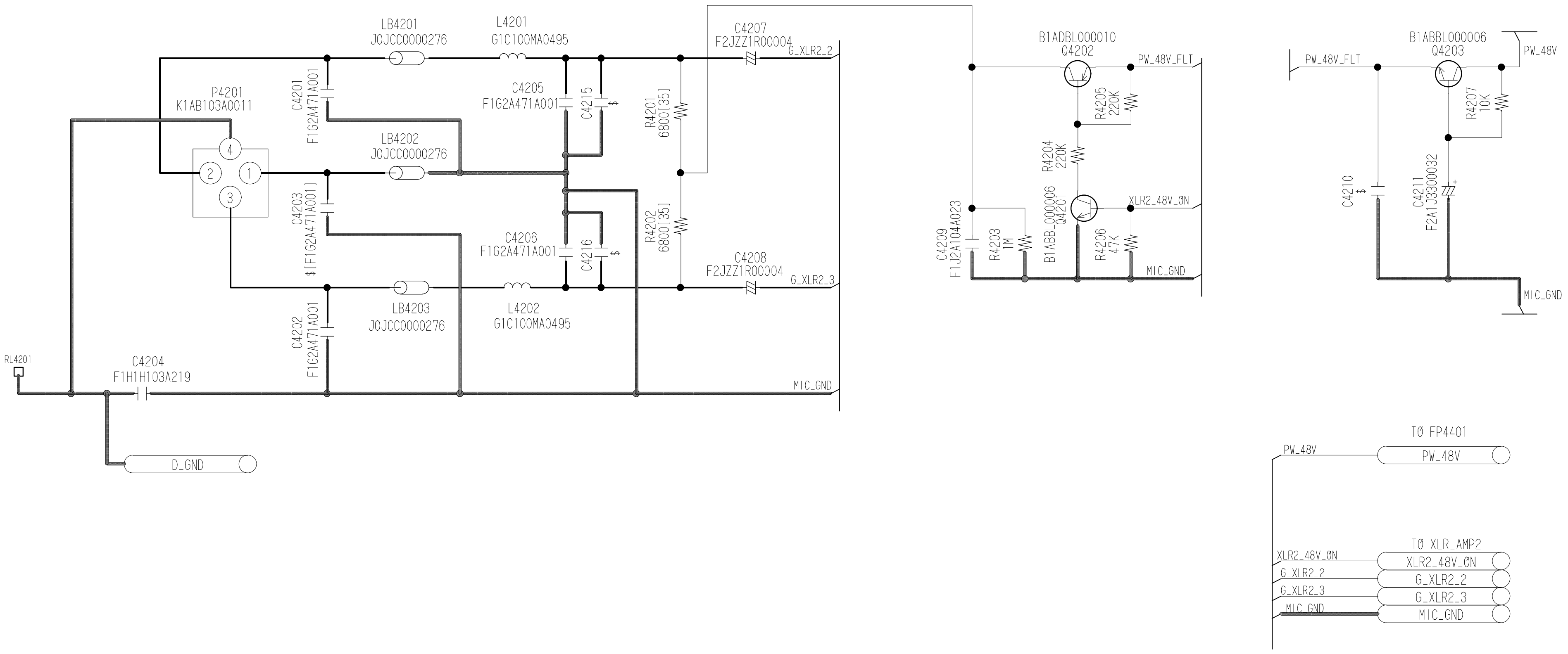


REF_NO:6850-6880

⚠ 警告 ⚠印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。

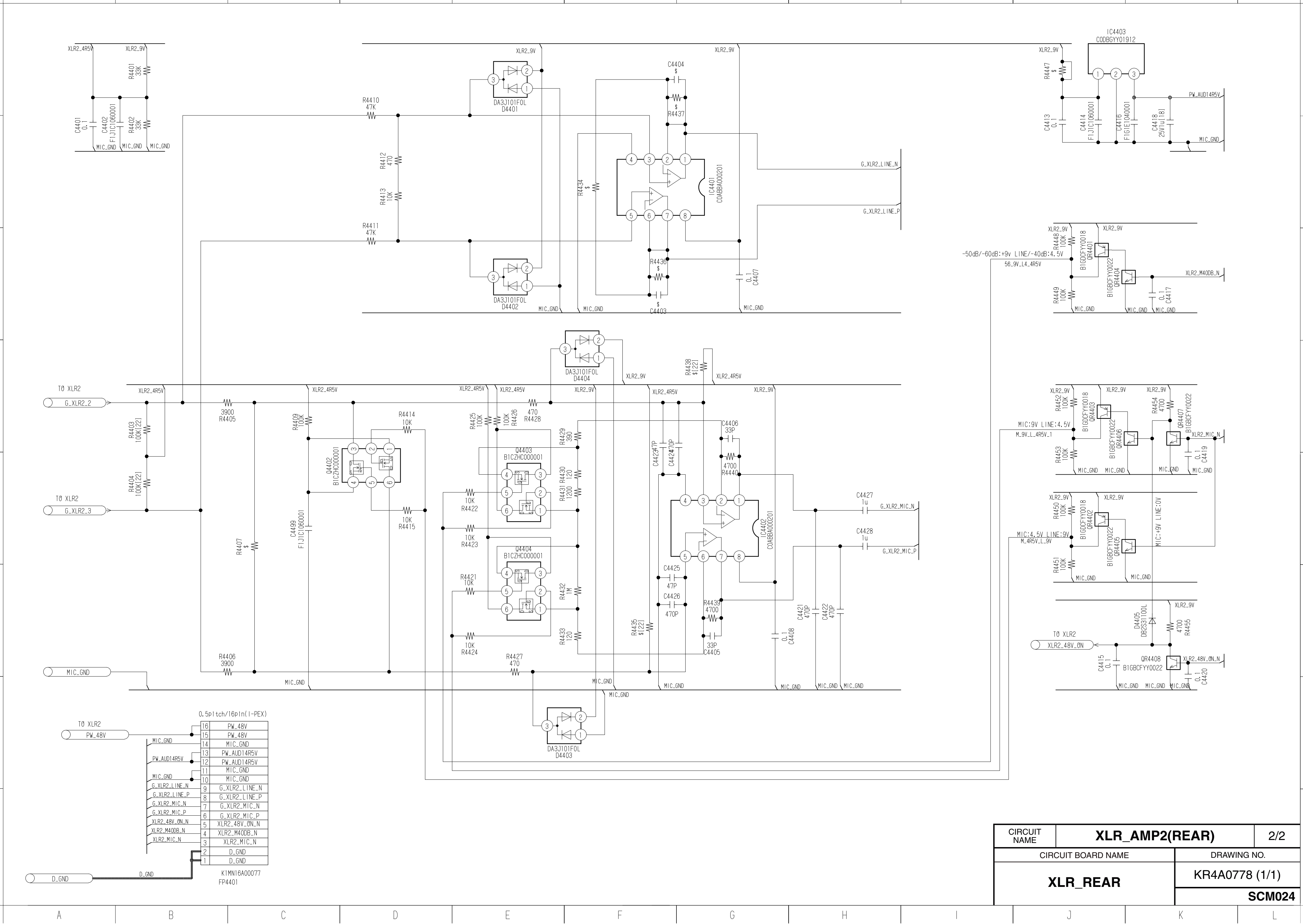
Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

CIRCUIT NAME	**JACK_DC**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
JACK_DC	KR1A1099 (1/1)	
	SCM022	

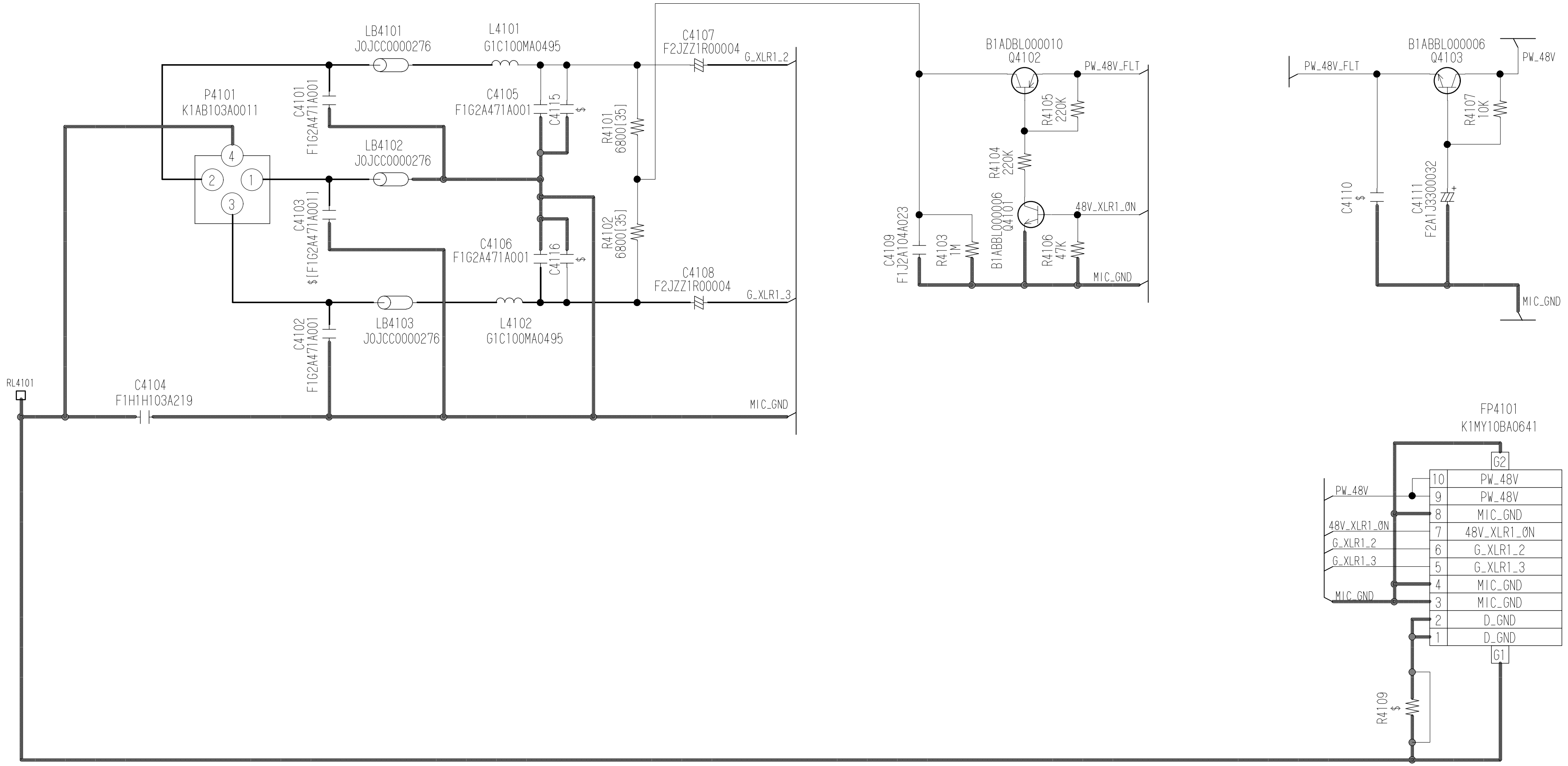


CIRCUIT NAME	**XLR2(REAR)**	1/2
CIRCUIT BOARD NAME		DRAWING NO.
XLR_REAR		KR4A0777 (1/1)
		SCM023

A3



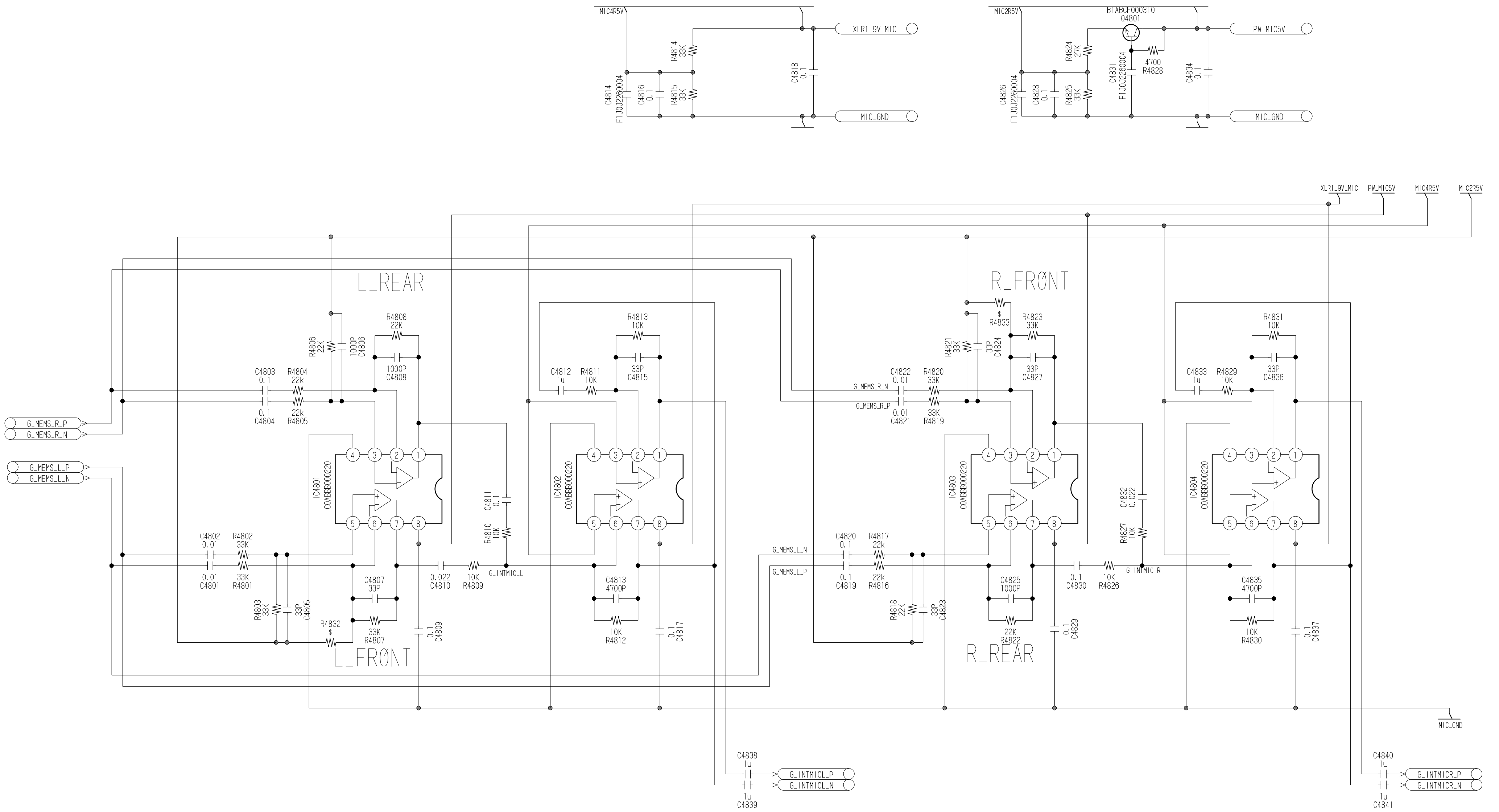
CIRCUIT NAME	XLR_AMP2(REAR)	2/2
CIRCUIT BOARD NAME	DRAWING NO.	
XLR_REAR	KR4A0778 (1/1)	
	SCM024	



CIRCUIT NAME	**XLR_FRONT**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
XLR_FRONT	KR4A0779 (1/1) **SCM025**	

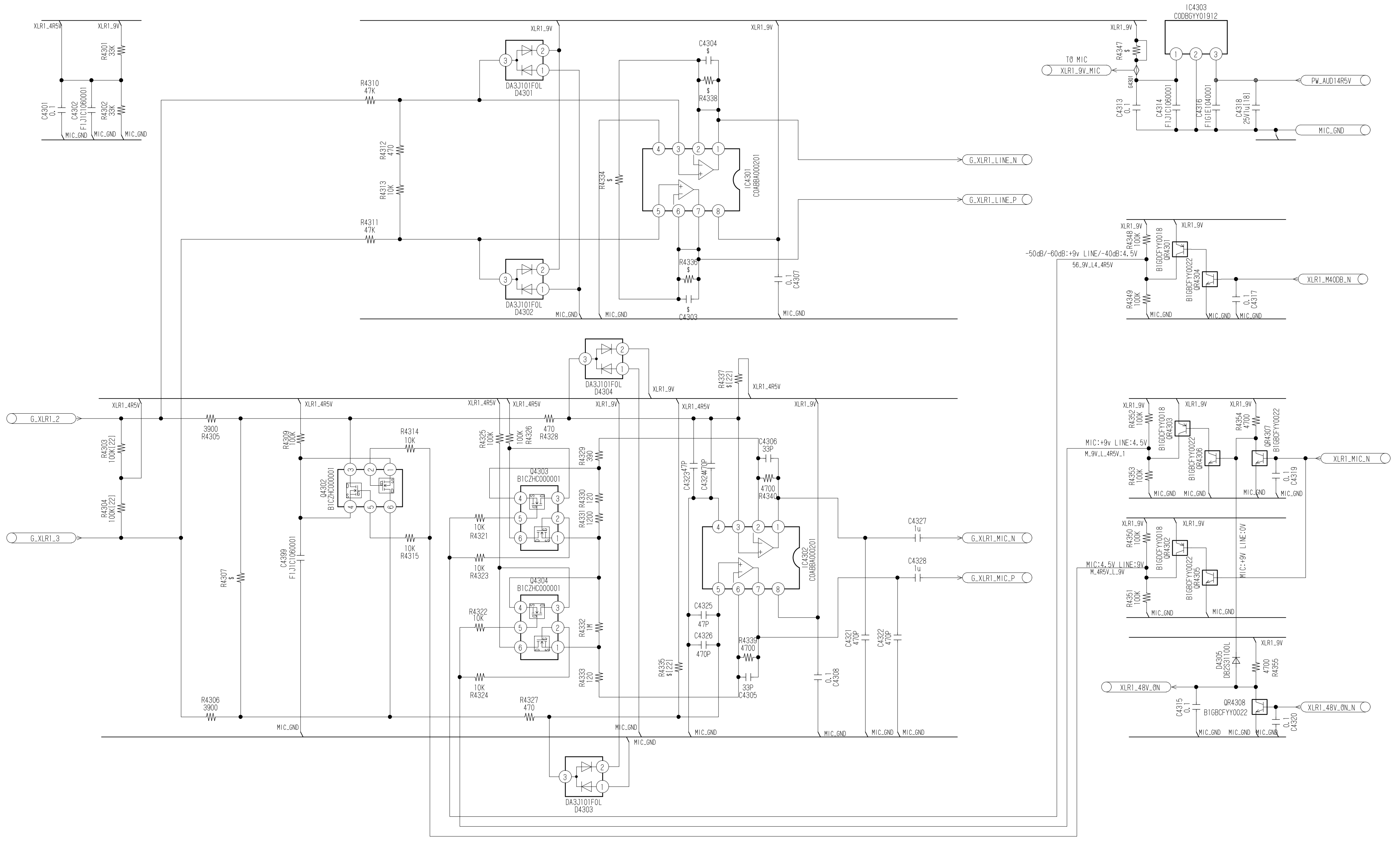
A3

Ref. No. #4801..#4850

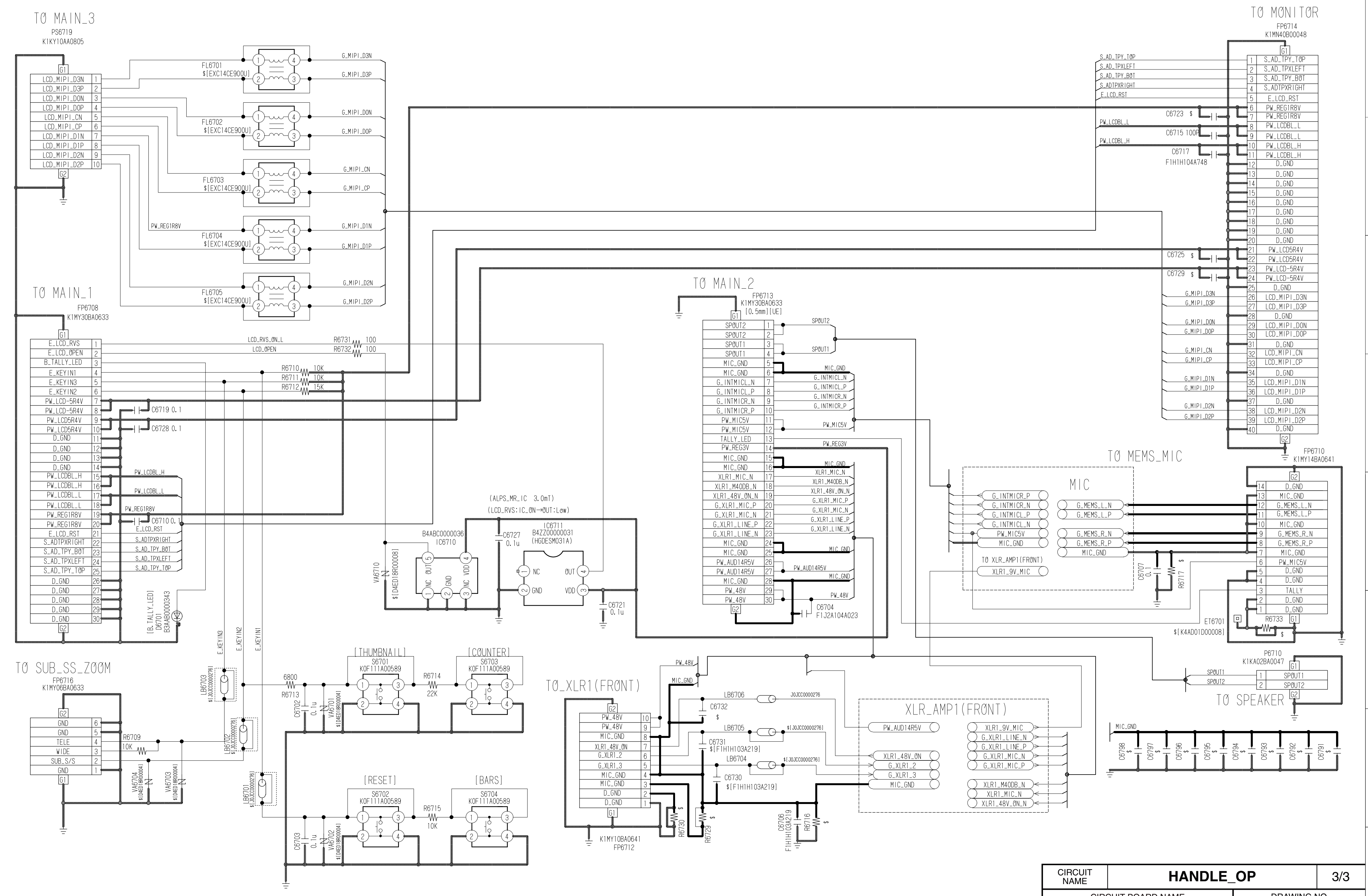


CIRCUIT NAME	MIC	1/3
CIRCUIT BOARD NAME	DRAWING NO.	
HANDLE_OP	KR4A0780-6 (1/1)	
	SCM026	

A2

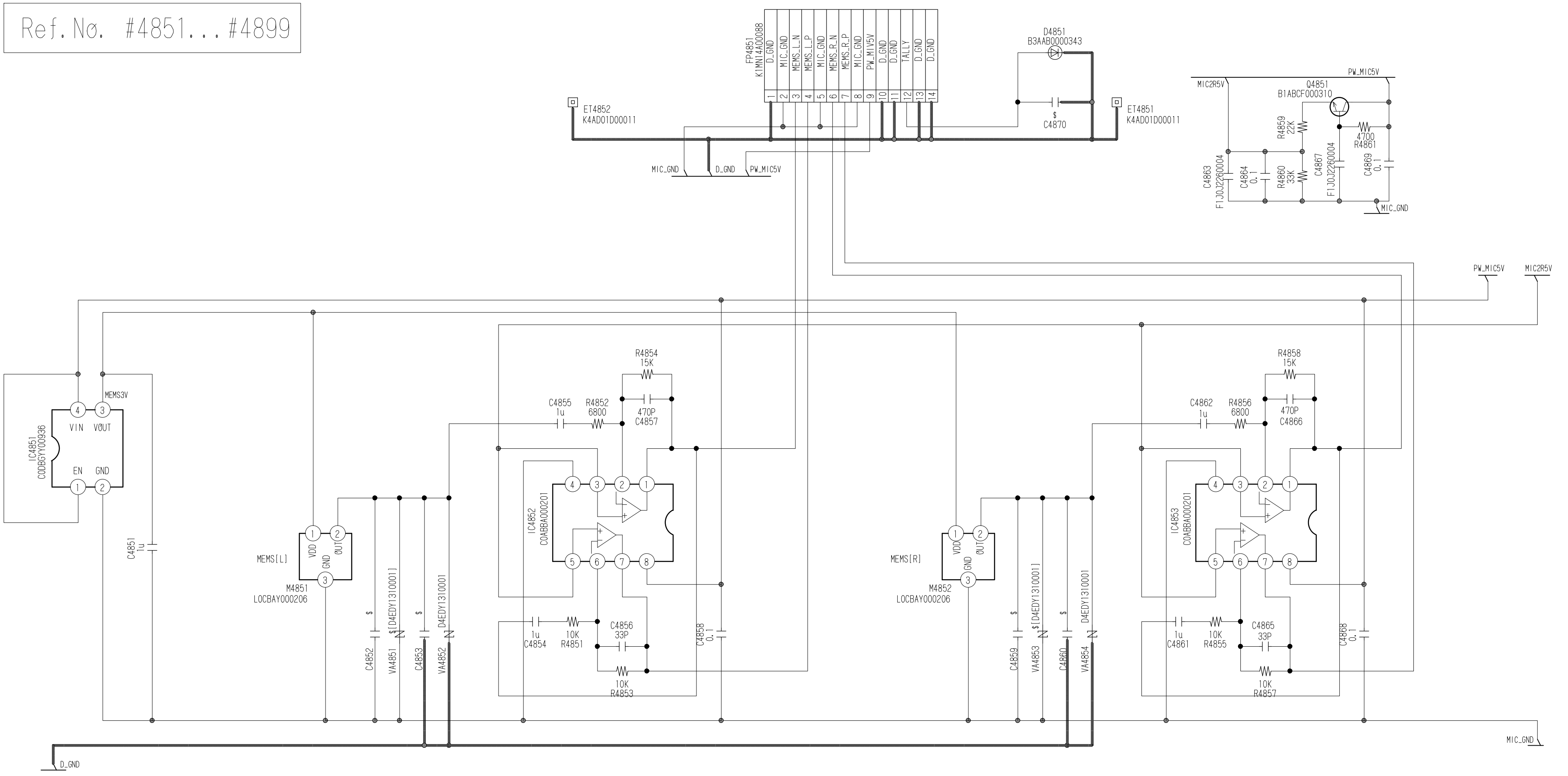


CIRCUIT NAME	XLR_AMP1(FRONT)	2/3
CIRCUIT BOARD NAME		DRAWING NO.
HANDLE_OP		KR4A0781-6 (1/1)
		SCM027



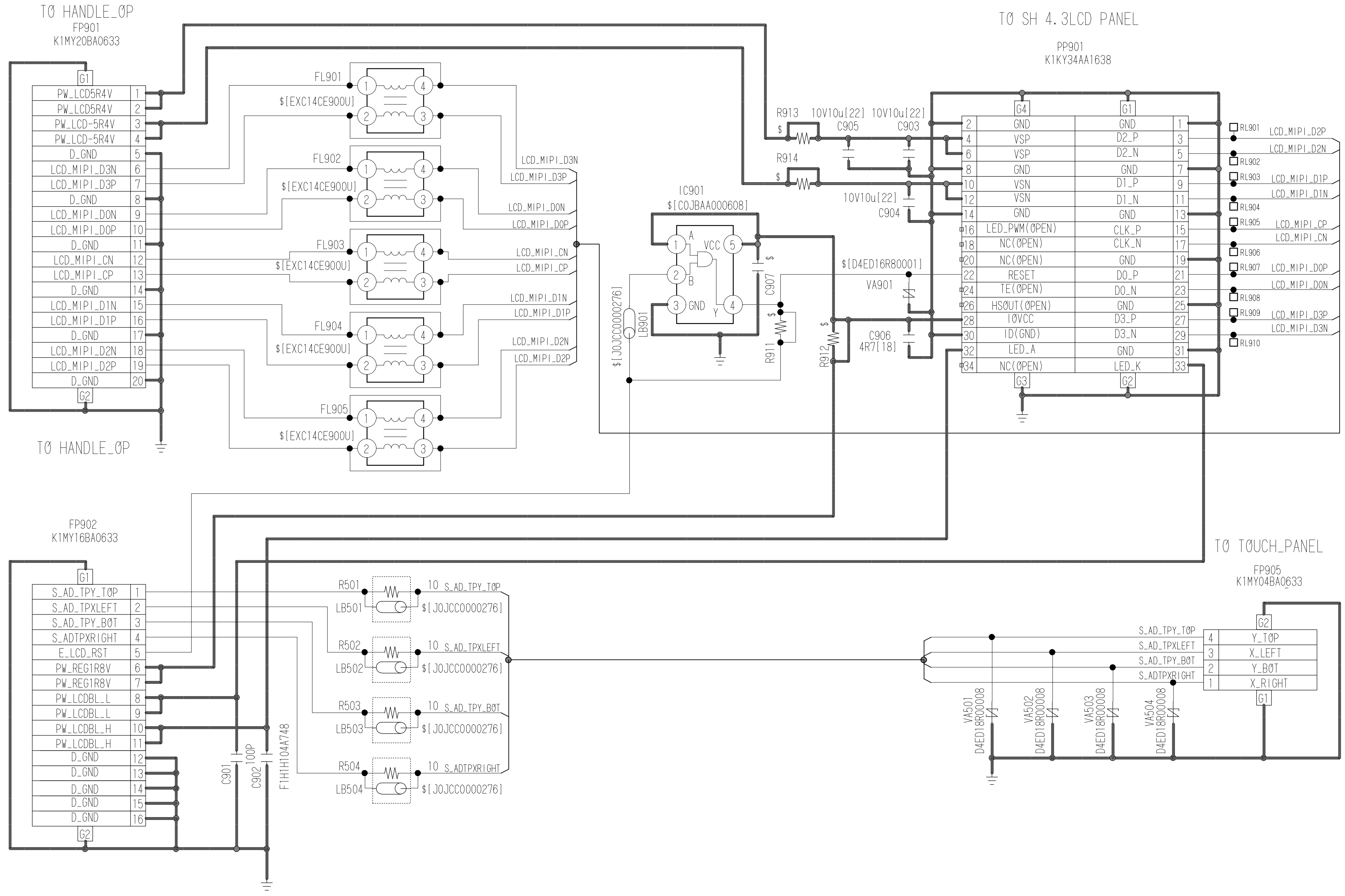
CIRCUIT NAME	HANDLE_OP	3/3
CIRCUIT BOARD NAME		DRAWING NO.
HANDLE_OP		KR0A2330 (1/1)
		SCM028

A2



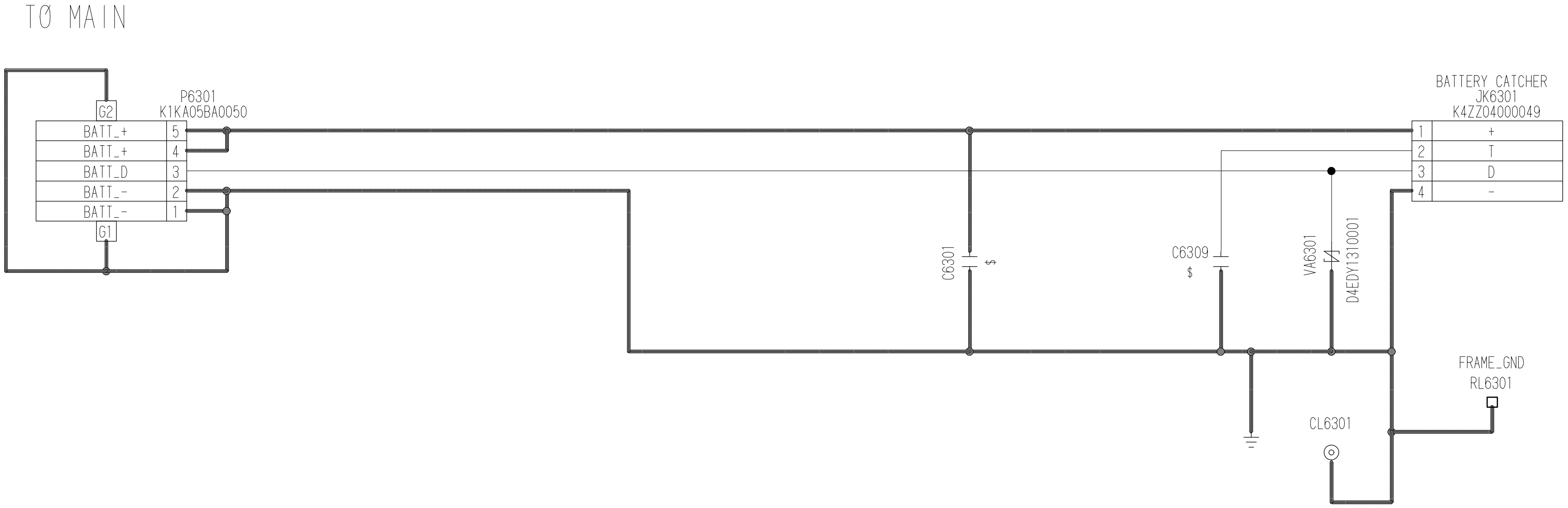
CIRCUIT NAME	**MEMS_MIC**	1/1
CIRCUIT BOARD NAME		DRAWING NO.
MEMS_MIC		KR4A0782 (1/1)
		SCM029

A2



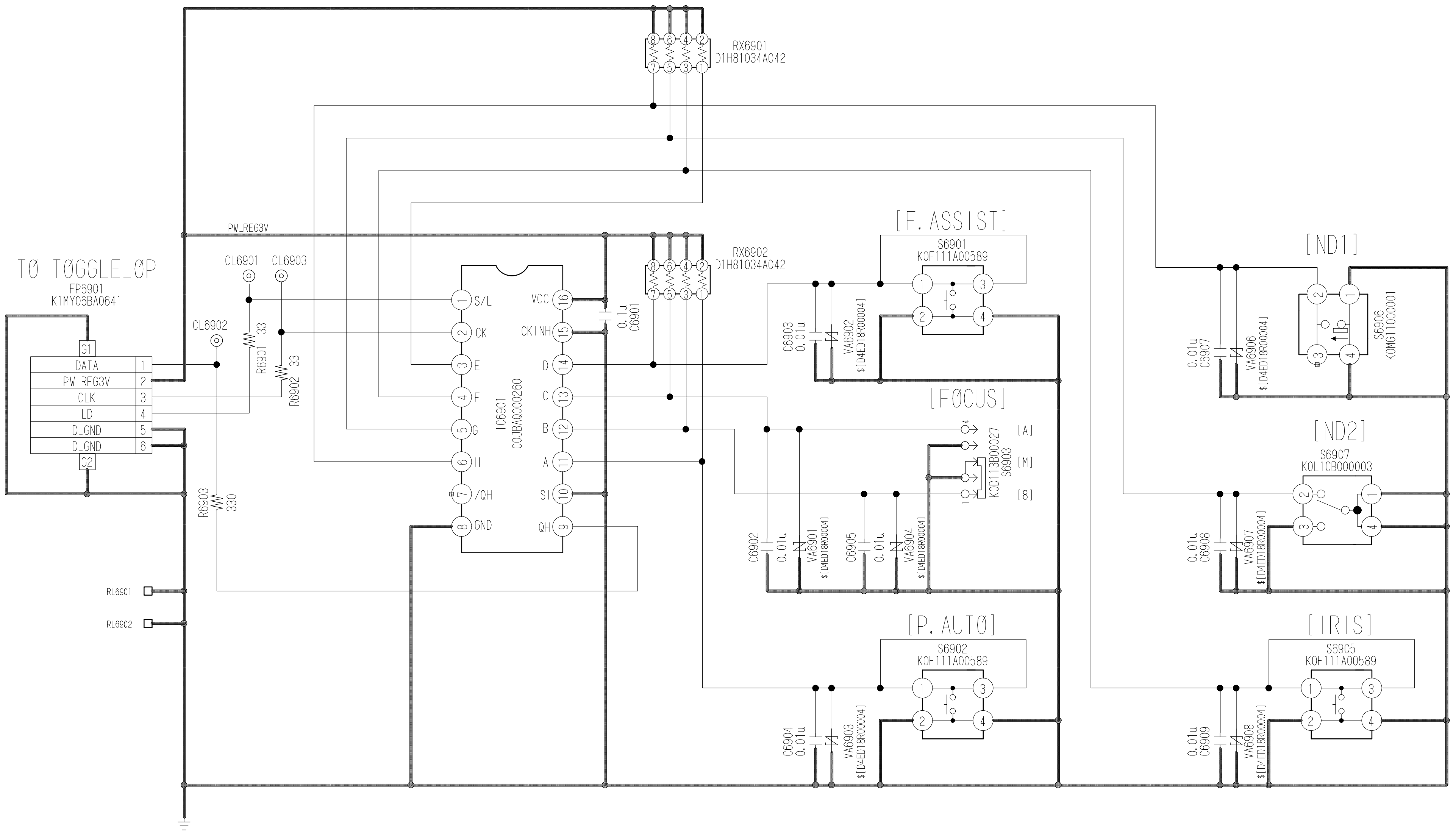
CIRCUIT NAME	MONITOR	1/1
CIRCUIT BOARD NAME		DRAWING NO.
MONITOR		KR3A2971 (1/1)
		SCM030

A3



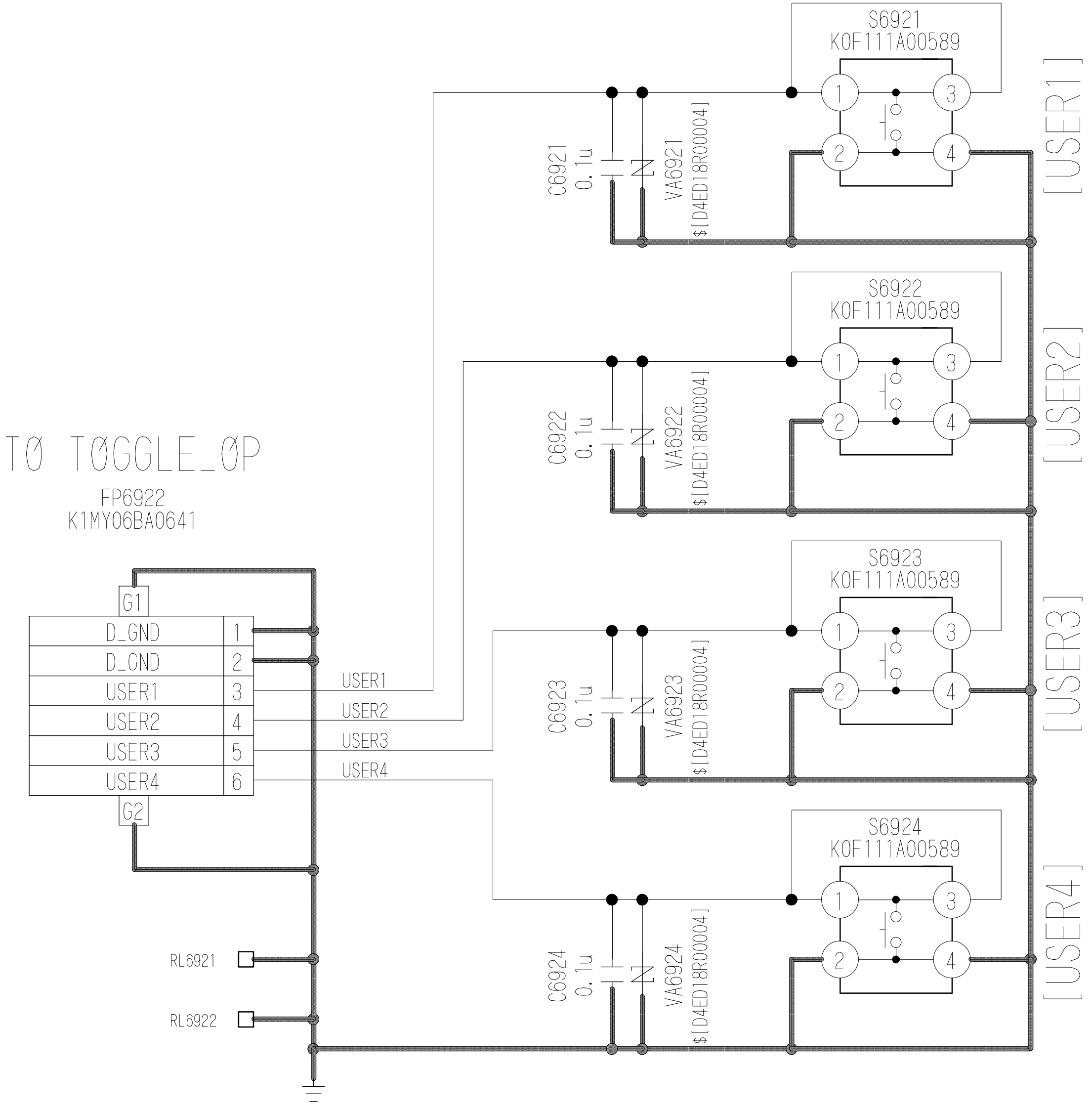
CIRCUIT NAME	**BATT_CATCHER**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
BATT_CATCHER	KR1A1100 (1/1) **SCM031**	

A3



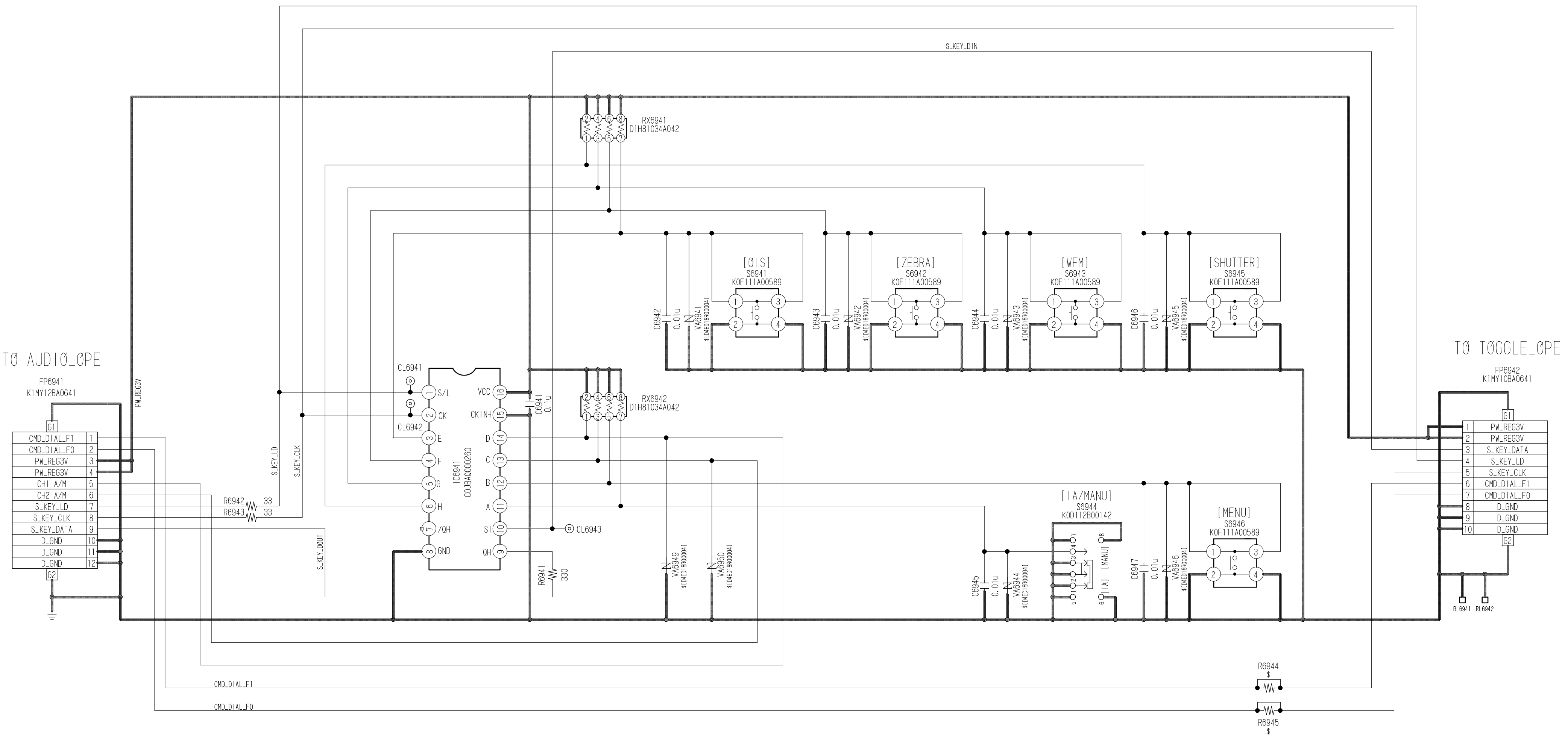
CIRCUIT NAME	OP_CAM	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
OP_CAM	KR0A2333 (1/1)	
	SCM032	

A3

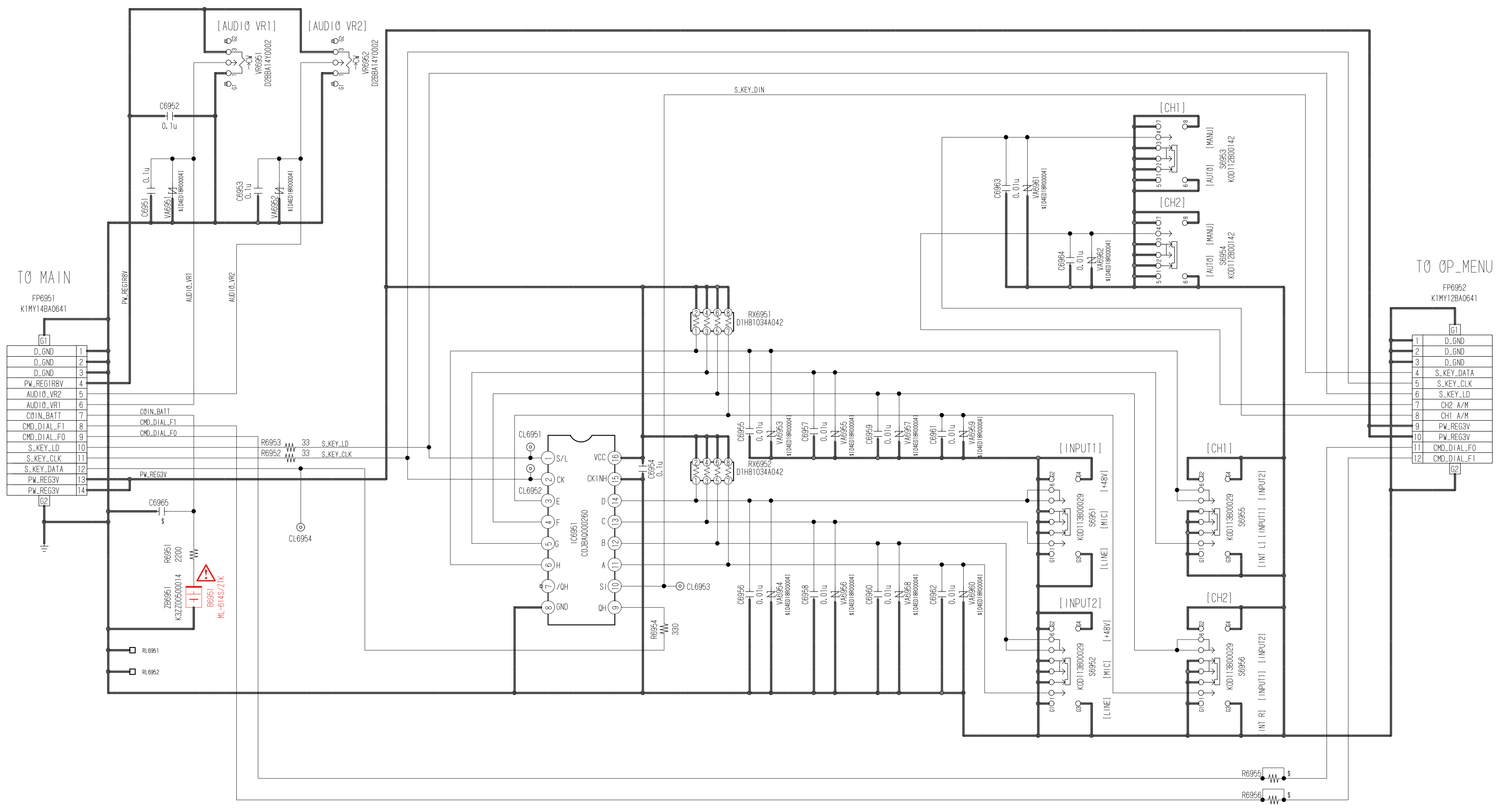


CIRCUIT NAME	OP_USER	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
OP_USER	KR0A2334 (1/1)	
	SCM033	

A4



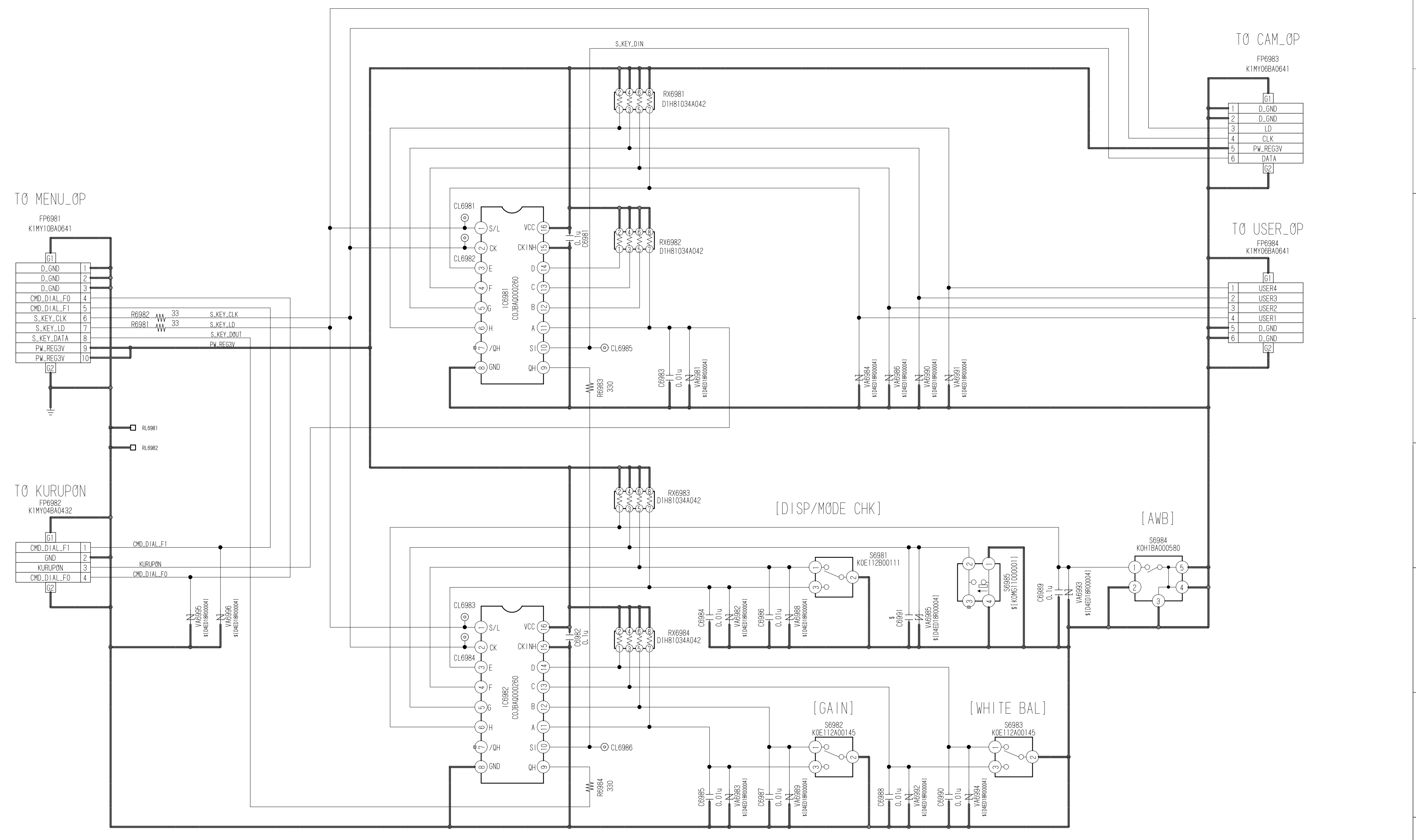
CIRCUIT NAME	OP_MENU	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
OP_MENU	KR0A2335 (1/1) SCM034	



⚠ 警告	⚠印の部品は安全上重要な部品です。交換するときは、 安全および性能維持のため必ず指定の部品をご使用ください。

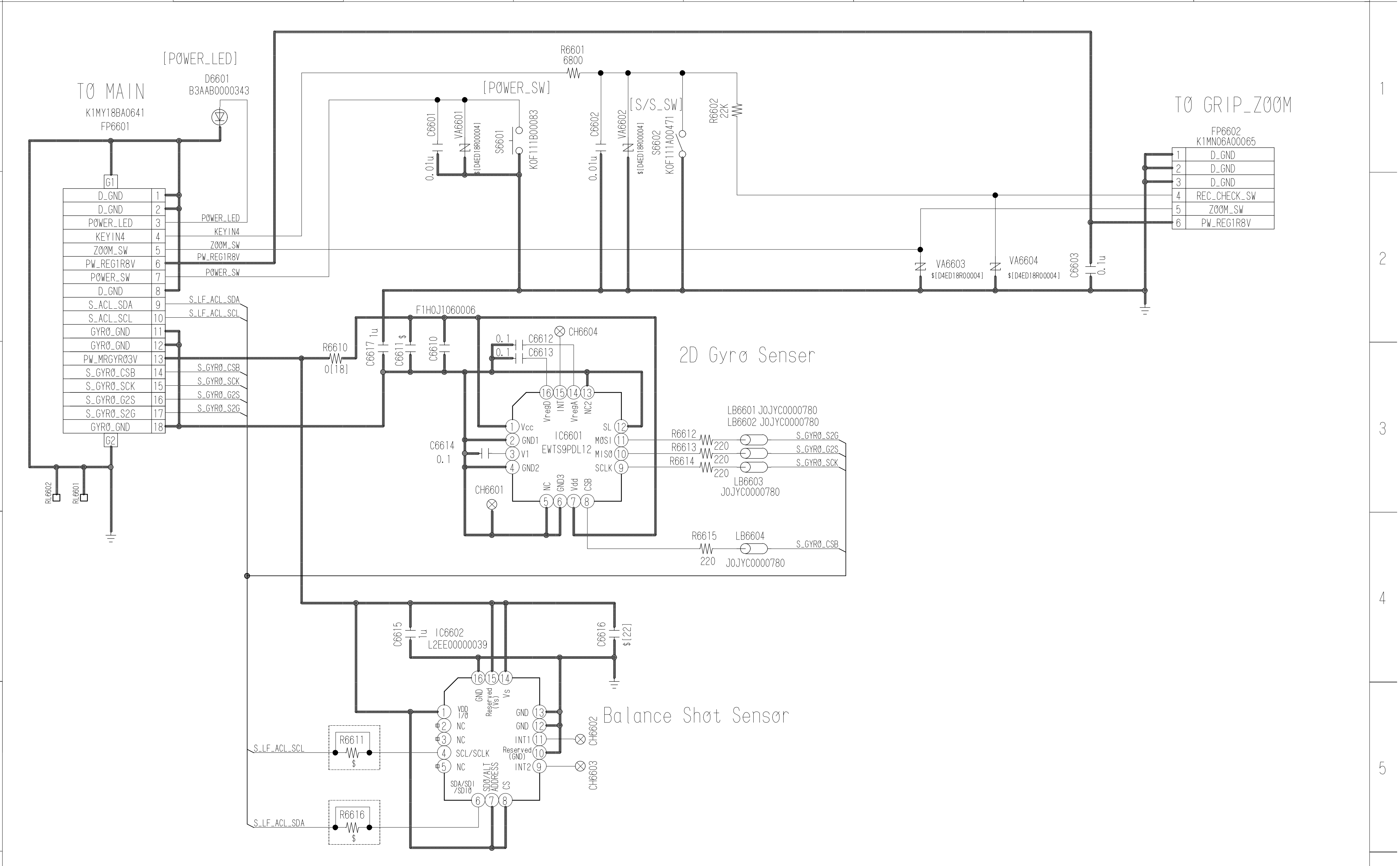
Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

CIRCUIT NAME	OP_AUDIO		1/1
CIRCUIT BOARD NAME		DRAWING NO.	
OP_AUDIO		KR0A2336 (1/1) **SCM035**	

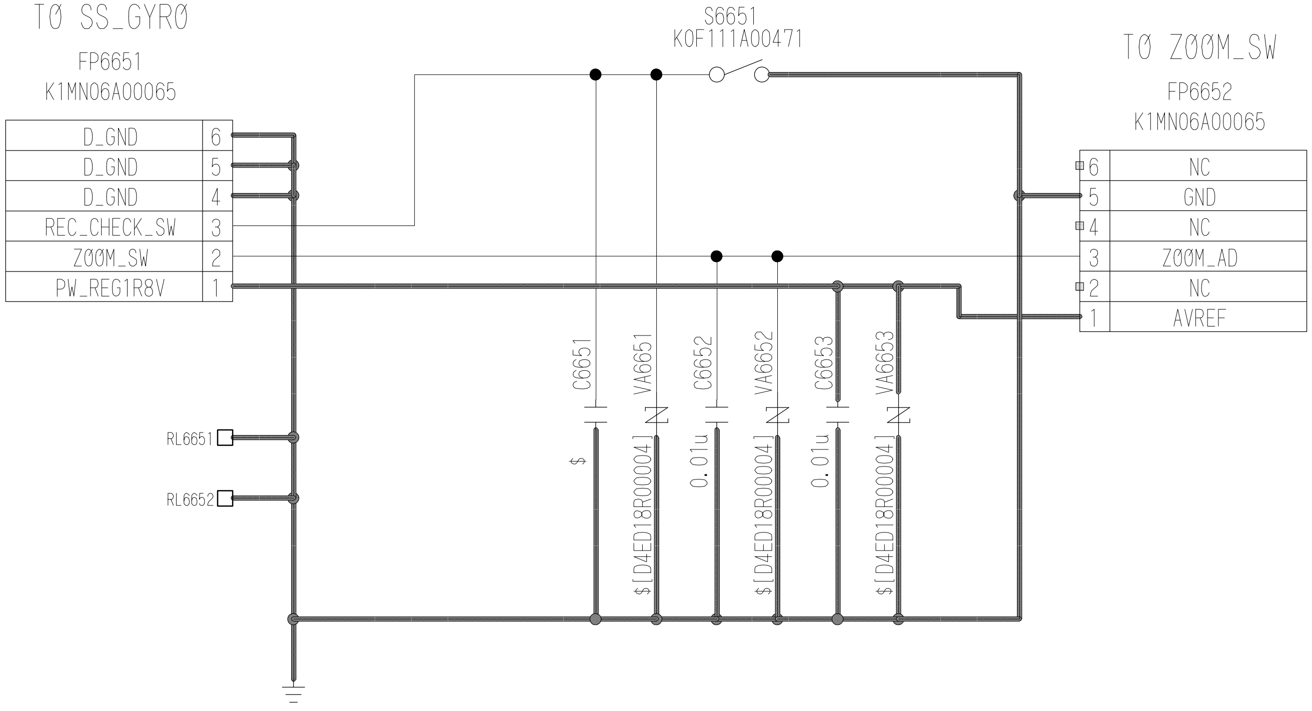


CIRCUIT NAME	**OP_TOGGLE**	1/1
CIRCUIT BOARD NAME		DRAWING NO.
OP_TOGGLE		KR0A2337 (1/1) **SCM036**

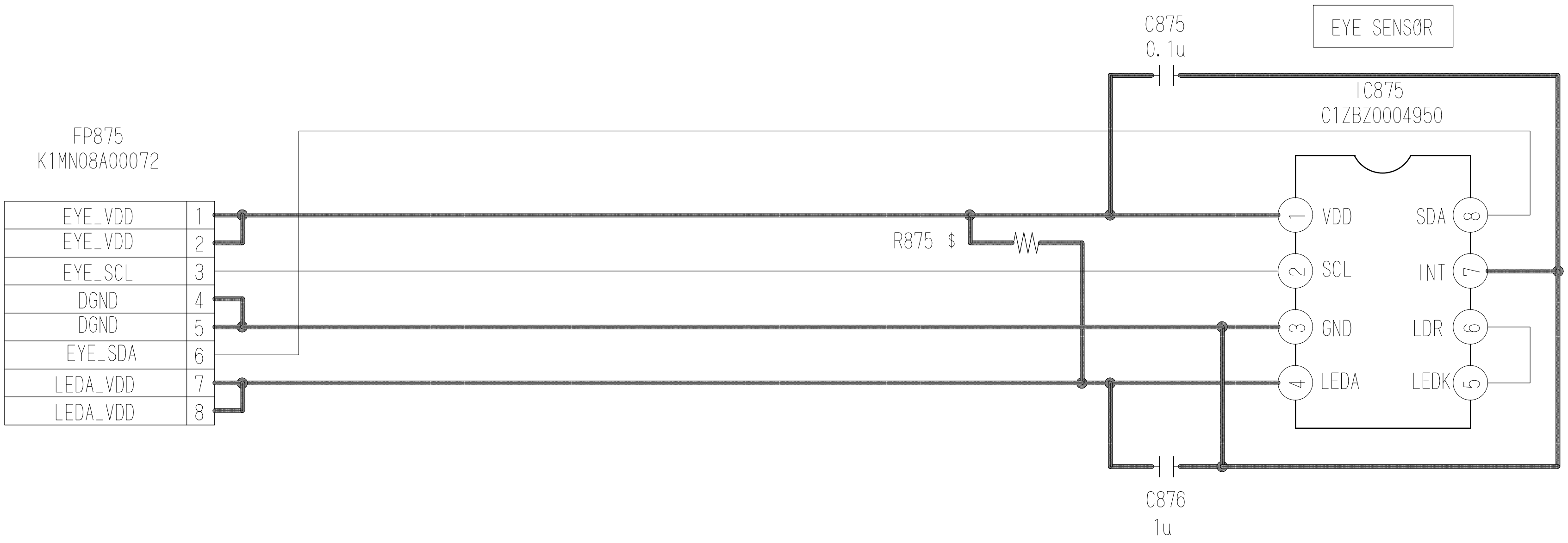
A2



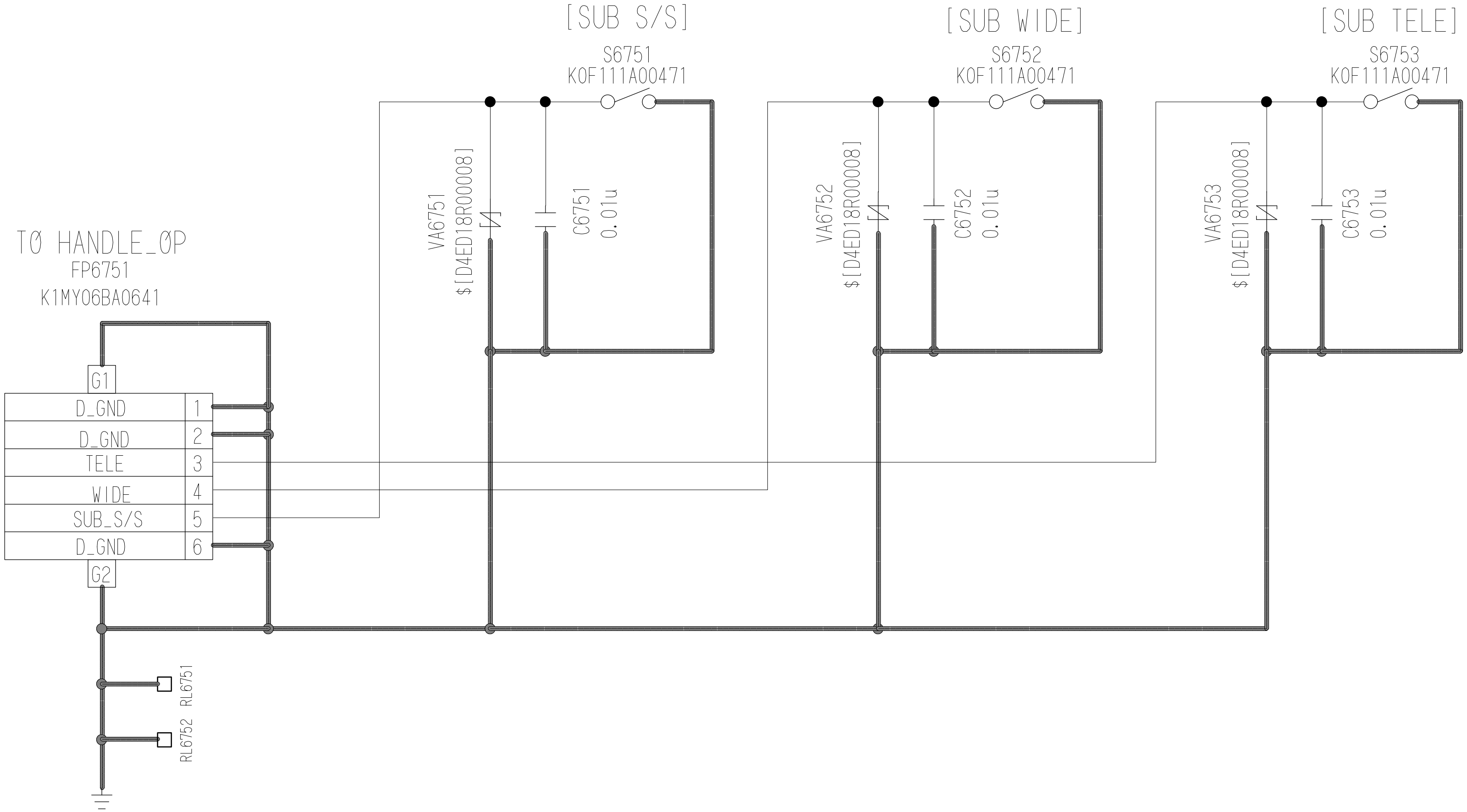
CIRCUIT NAME	**SS_GYRO**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
SS_GYRO	KR0A2339 (1/1) **SCM037**	



CIRCUIT NAME	**GRIP_ZOOM**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
GRIP_ZOOM	KR0A2340 (1/1) **SCM038**	



CIRCUIT NAME	**EYE_SENSOR**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
EYE_SENSOR	KR0A2341 (1/1)	
	SCM039	



CIRCUIT NAME	**SUB_SS_ZOOM**	1/1
CIRCUIT BOARD NAME	DRAWING NO.	
SUB_SS_ZOOM	KR0A2342 (1/1) **SCM040**	

SECTION 5

PRINTED CIRCUIT BOARD
プリント基板図

品番/Model No. : AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC

注意：本セクションは、主要基板のみ記載しています。
NOTE: Only the main circuit board is shown in this section.

基板図上の部品位置を検索することが出来ます。
PDF の検索機能を使用すると、指定した REF No.がハイライト表示されます。

The positions of parts on the circuit board diagrams can be searched.
When the search function of Adobe Acrobat is used, the character of specified part is displays as highlight.

NOTE:
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST SECTION.

CAUTION
THE ▭ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

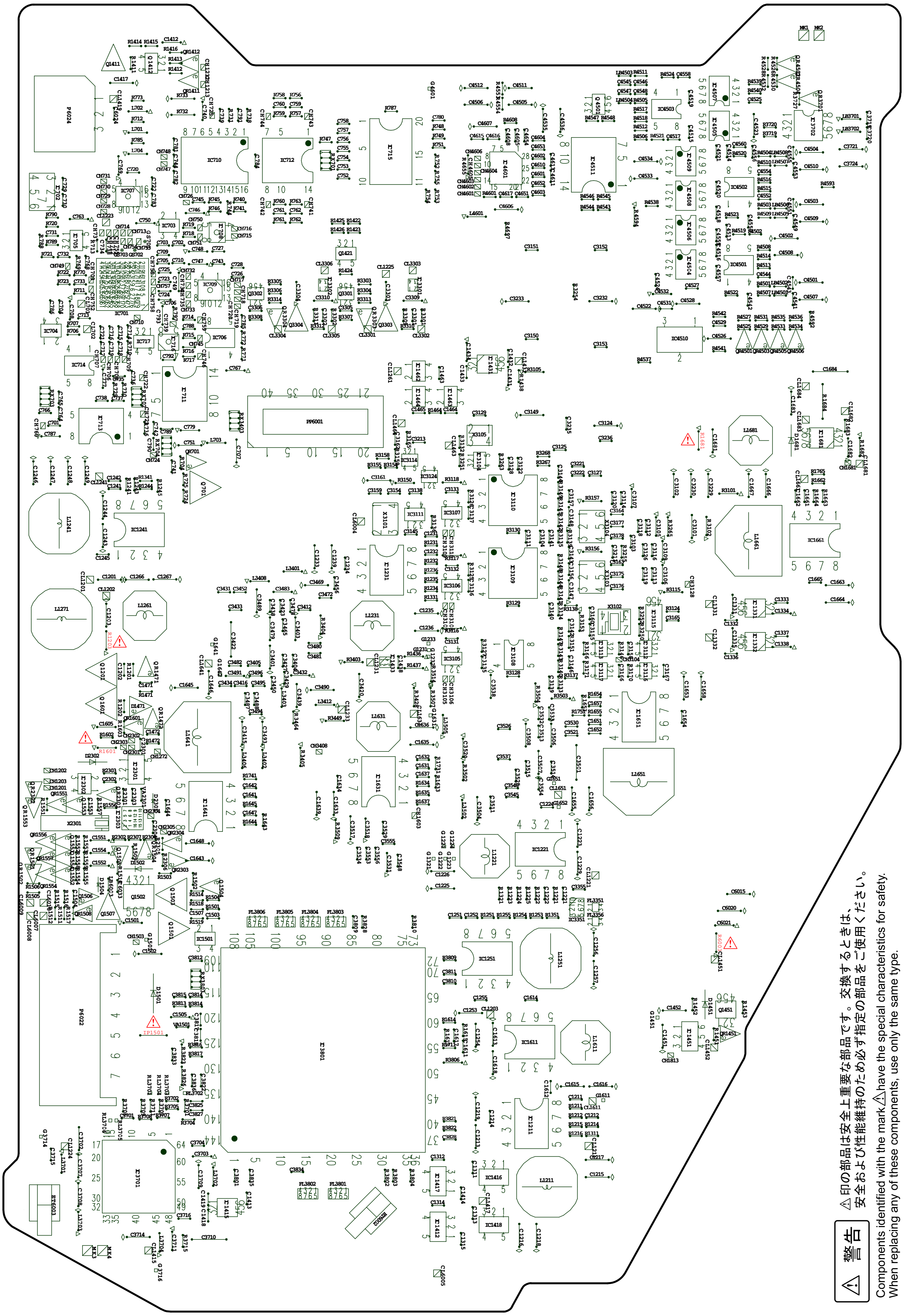
⚠ 警 告	
⚠ 感電注意	AC100Vの加わっている活電部(充電部、活電部)に直接触れないでください。 ☞ 感電ややけどの可能性があります。

① ⚠ 警 告　⚠ 印の部品は安全上重要な部品です。交換するときは、安全上および性能維持のため必ず指定の部品をご使用ください。
② ▭ 内は充電部です。AC 100Vが加わっておりますので点検、修理のときは感電しないよう充分ご注意ください。
③ 部品交換時には、電源プラグをぬいてから行ってください。
④ 一次側（充電部）の電圧・波形は、一次側アースを基準に測定してください。
⑤ 部品品番は、部品リストで確認の上交換ください。

CONTENTS

MAIN P.C.BOARD (FOIL SIDE) PCB-1
MAIN P.C.BOARD (COMPONENT SIDE) PCB-2
EVF P.C.BOARD (FOIL SIDE) PCB-3
EVF P.C.BOARD (COMPONENT SIDE) PCB-4
SD_HOLDER P.C.BOARD (FOIL SIDE) PCB-5
SD_HOLDER P.C.BOARD (COMPONENT SIDE) PCB-6
JACK_A_WIRED P.C.BOARD (FOIL SIDE) PCB-7
JACK_A_WIRED P.C.BOARD (COMPONENT SIDE) PCB-8
JACK_BNC P.C.BOARD (FOIL SIDE) PCB-9
JACK_BNC P.C.BOARD (COMPONENT SIDE) PCB-10
JACK_DC P.C.BOARD (FOIL SIDE) PCB-11
JACK_DC P.C.BOARD (COMPONENT SIDE) PCB-12
XLR_REAR P.C.BOARD (FOIL SIDE) PCB-13
XLR_REAR P.C.BOARD (COMPONENT SIDE) PCB-14
XLR_FRONT P.C.BOARD (FOIL SIDE) PCB-15
XLR_FRONT P.C.BOARD (COMPONENT SIDE) PCB-16
HANDLE_OP P.C.BOARD (FOIL SIDE) PCB-17
HANDLE_OP P.C.BOARD (COMPONENT SIDE) PCB-18
MEMS_MIC P.C.BOARD (FOIL SIDE) PCB-19
MEMS_MIC P.C.BOARD (COMPONENT SIDE) PCB-20
MONITOR P.C.BOARD (FOIL SIDE) PCB-21
BATT_CATCHER P.C.BOARD (FOIL SIDE) PCB-22
BATT_CATCHER P.C.BOARD (COMPONENT SIDE) PCB-23
OP_CAM P.C.BOARD (FOIL SIDE) PCB-24
OP_CAM P.C.BOARD (COMPONENT SIDE) PCB-25
OP_USER P.C.BOARD (FOIL SIDE) PCB-26
OP_USER P.C.BOARD (COMPONENT SIDE) PCB-26
OP_MENU P.C.BOARD (FOIL SIDE) PCB-27
OP_MENU P.C.BOARD (COMPONENT SIDE) PCB-28
OP_AUDIO P.C.BOARD (FOIL SIDE) PCB-29
OP_AUDIO P.C.BOARD (COMPONENT SIDE) PCB-30
OP_TOGGLE P.C.BOARD (FOIL SIDE) PCB-31
OP_TOGGLE P.C.BOARD (COMPONENT SIDE) PCB-32
SS_GYRO P.C.BOARD (FOIL SIDE) PCB-33
SS_GYRO P.C.BOARD (COMPONENT SIDE) PCB-34
GRIP_ZOOM P.C.BOARD (FOIL SIDE) PCB-35
GRIP_ZOOM P.C.BOARD (COMPONENT SIDE) PCB-36
EYE_SENSOR P.C.BOARD (FOIL SIDE) PCB-37
EYE_SENSOR P.C.BOARD (COMPONENT SIDE) PCB-37
SUB_SS_ZOOM P.C.BOARD (FOIL SIDE) PCB-38
SUB_SS_ZOOM P.C.BOARD (COMPONENT SIDE) PCB-39

MAIN P.C.BOARD (FOIL SIDE)



⚠ 警告

⚠印の部品は安全上重要な部品です。交換するときは、
安全および性能維持のため必ず指定の部品をご使用ください。

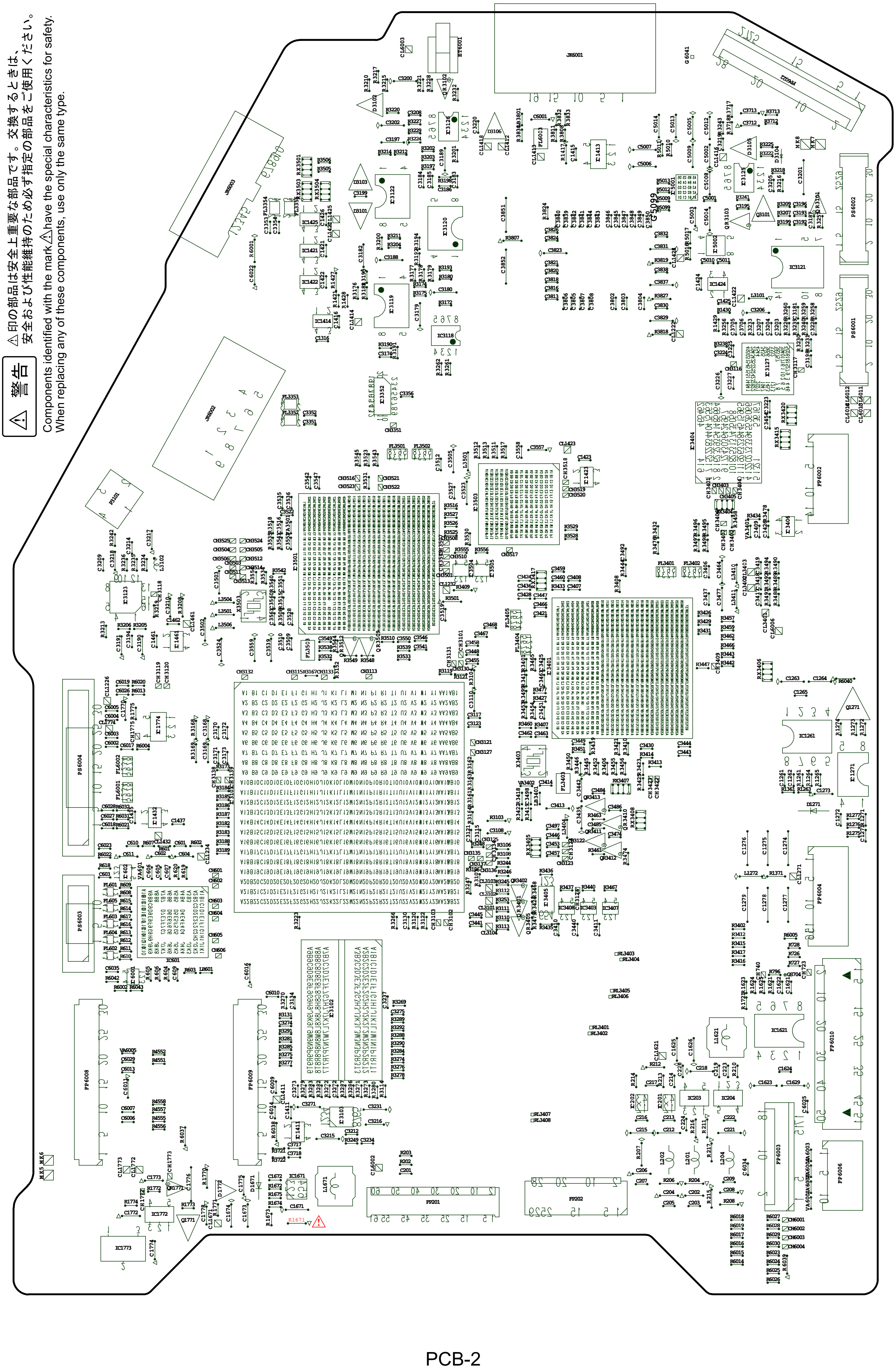
Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

MAIN P.C.BOARD (COMPONENT SIDE)

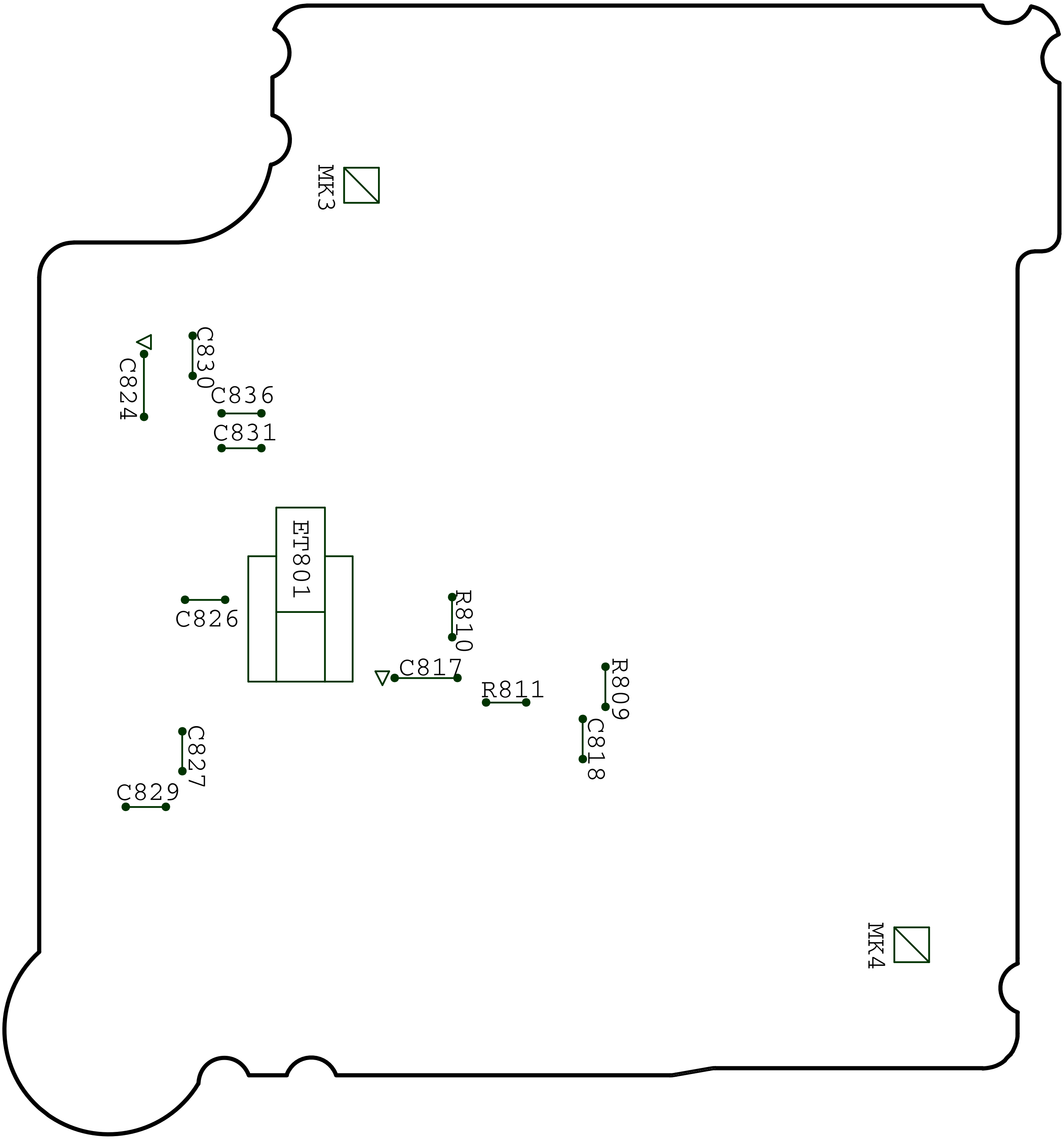
⚠ 警告

△印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。

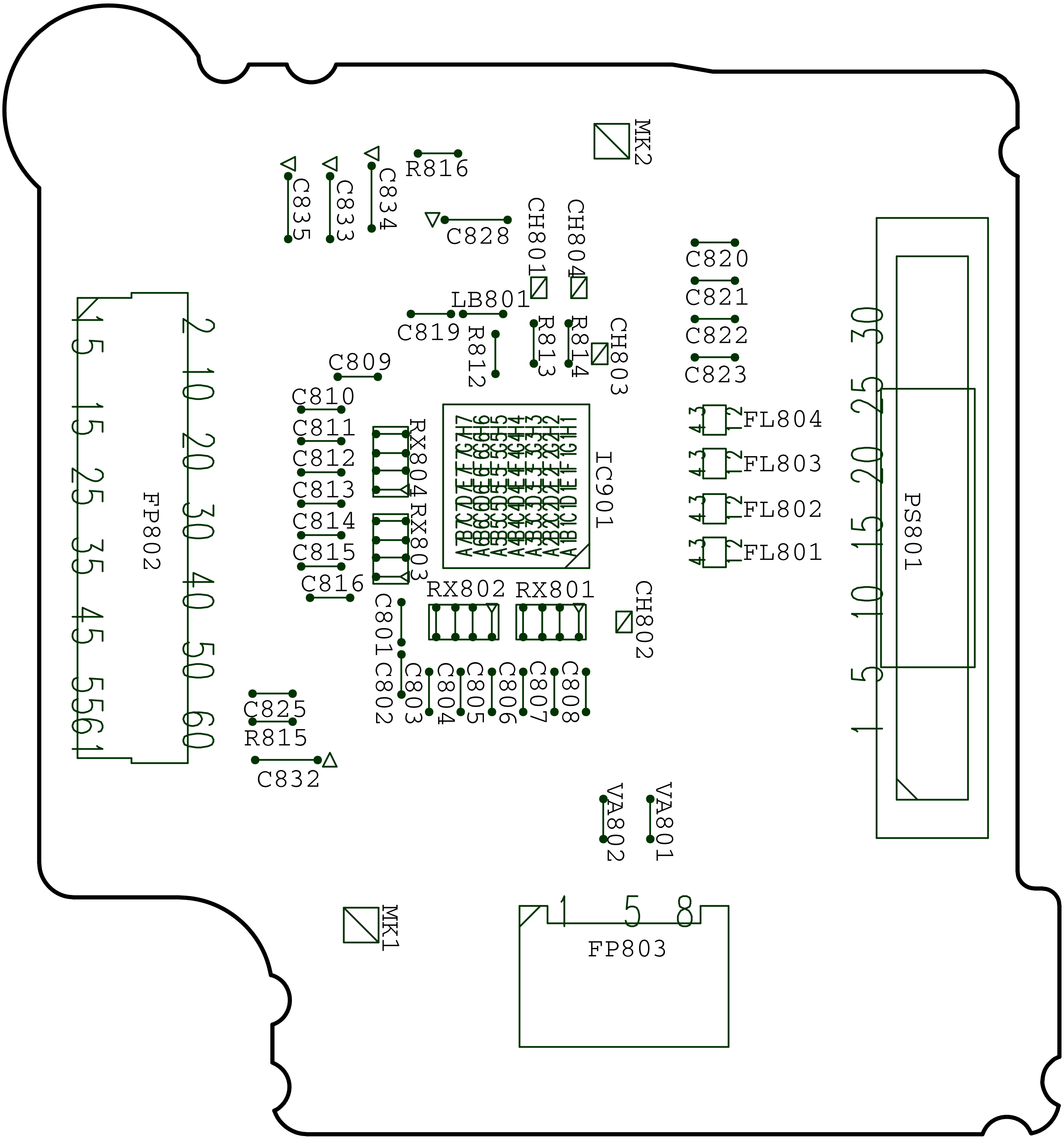
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.



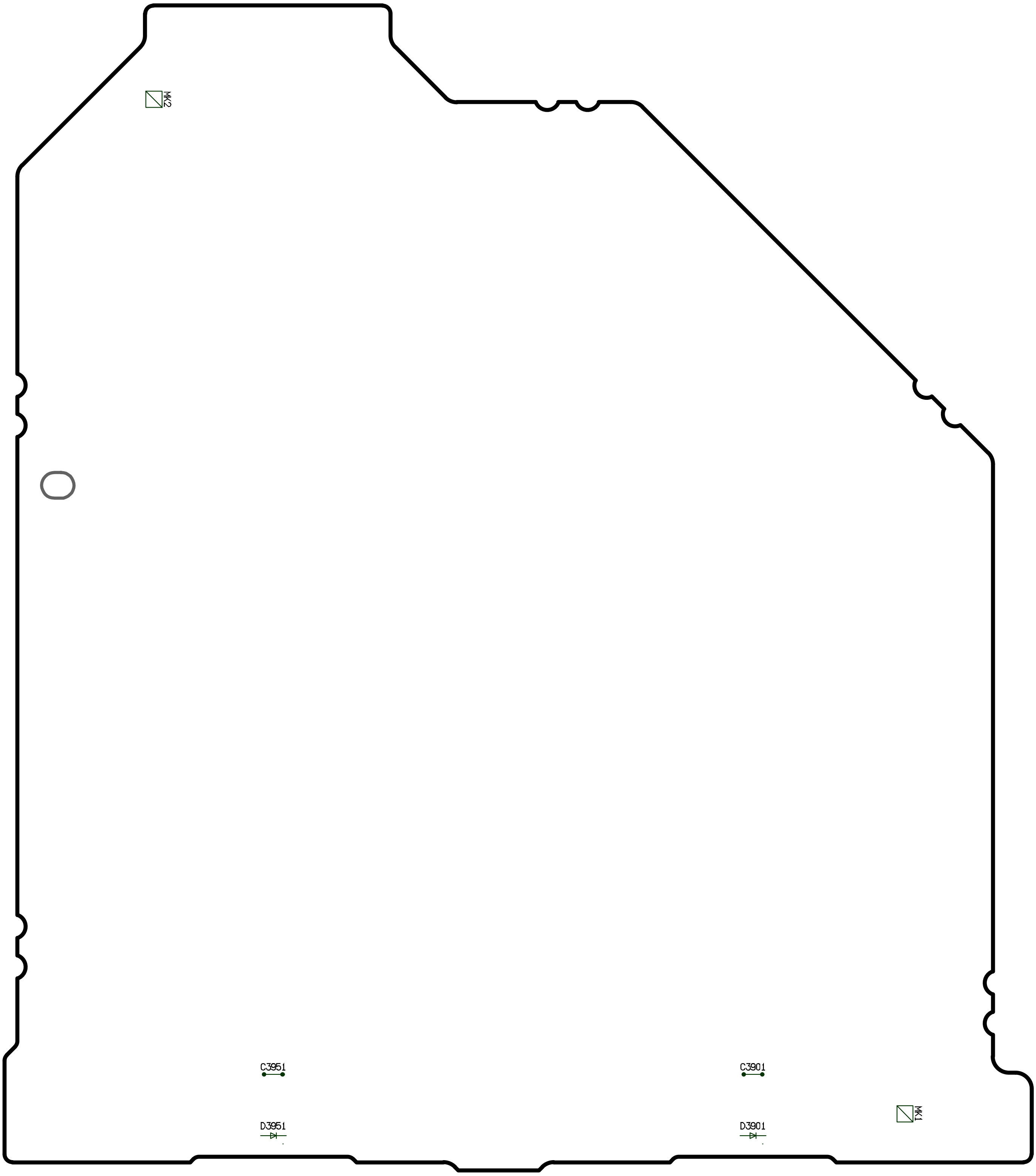
EVF P.C.BOARD (FOIL SIDE)



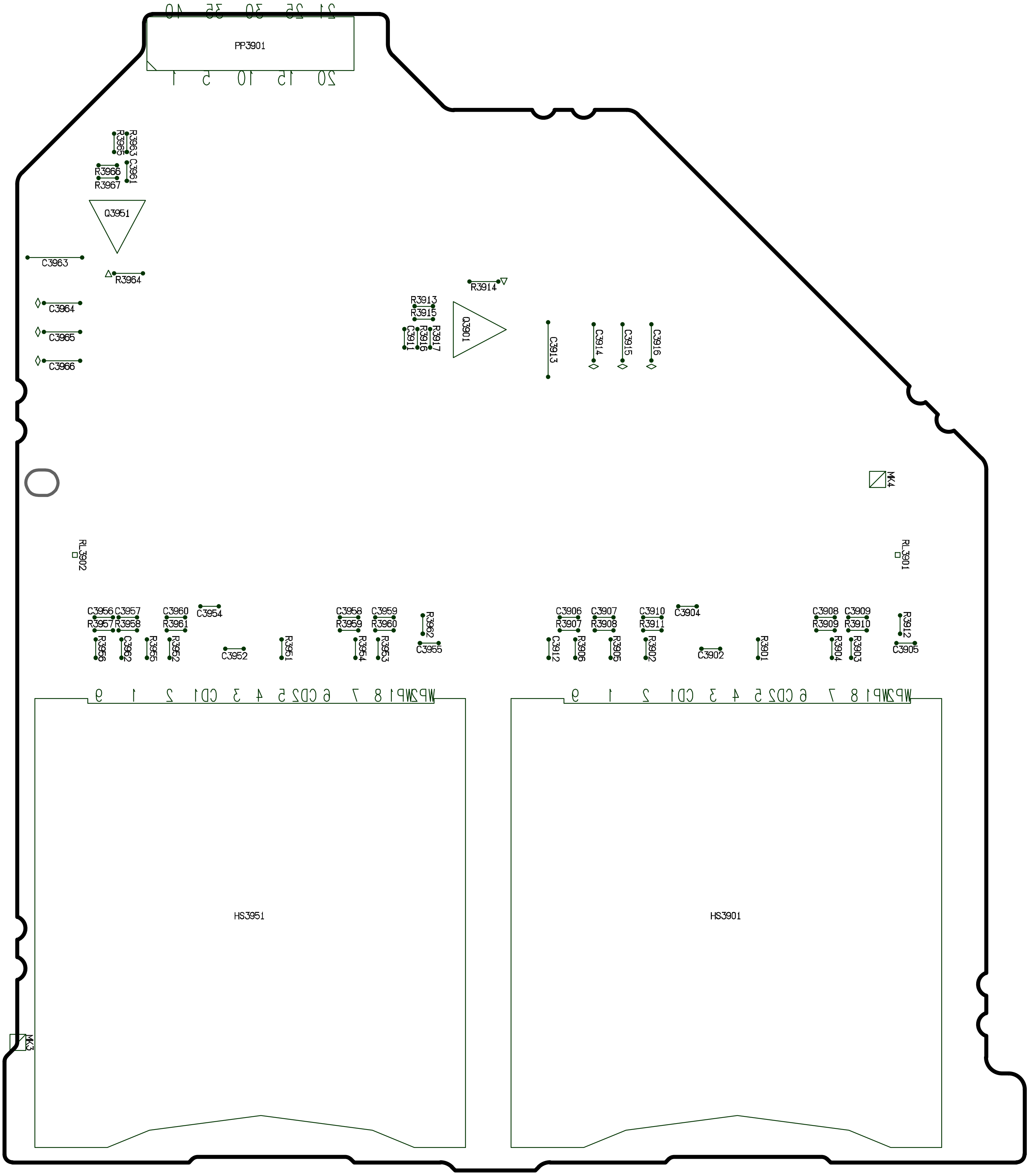
EVF P.C.BOARD (COMPONENT SIDE)



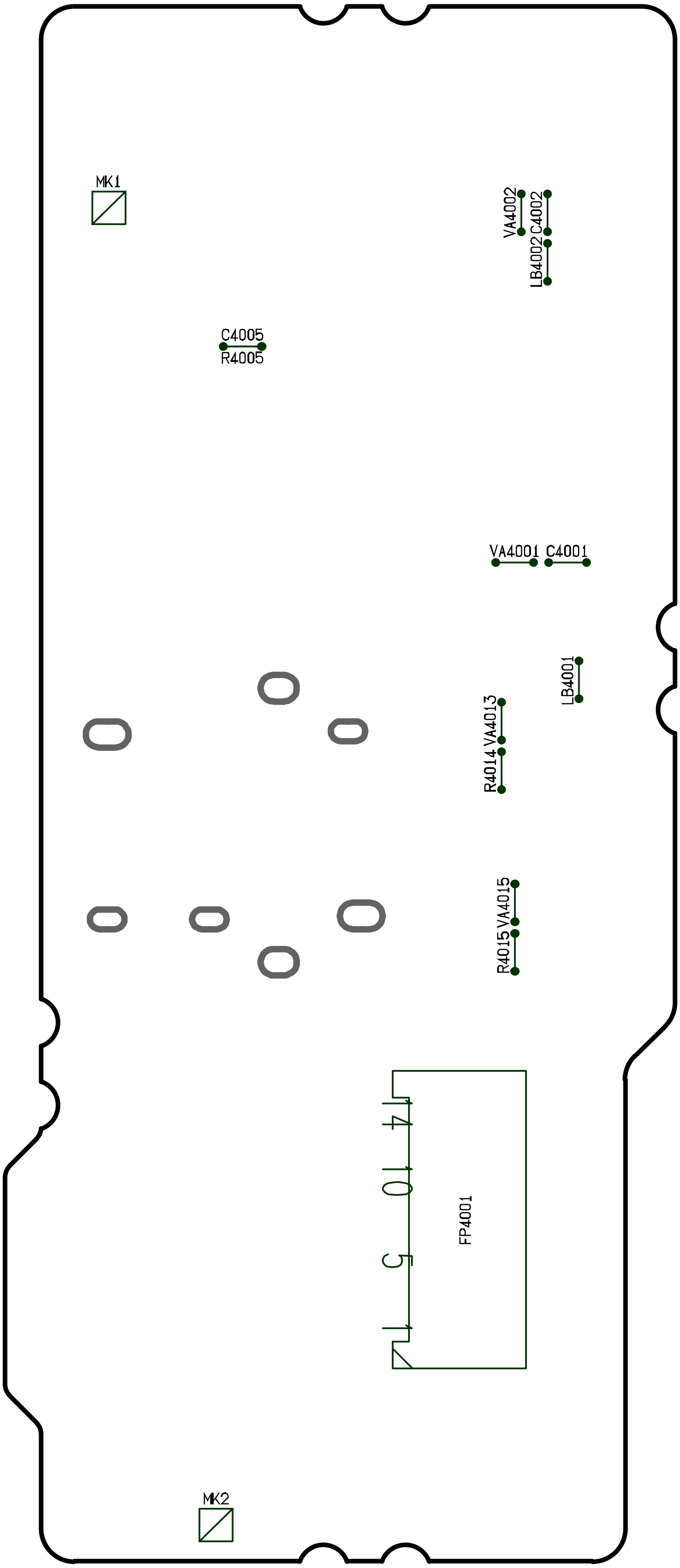
SD_HOLDER P.C.BOARD (FOIL SIDE)



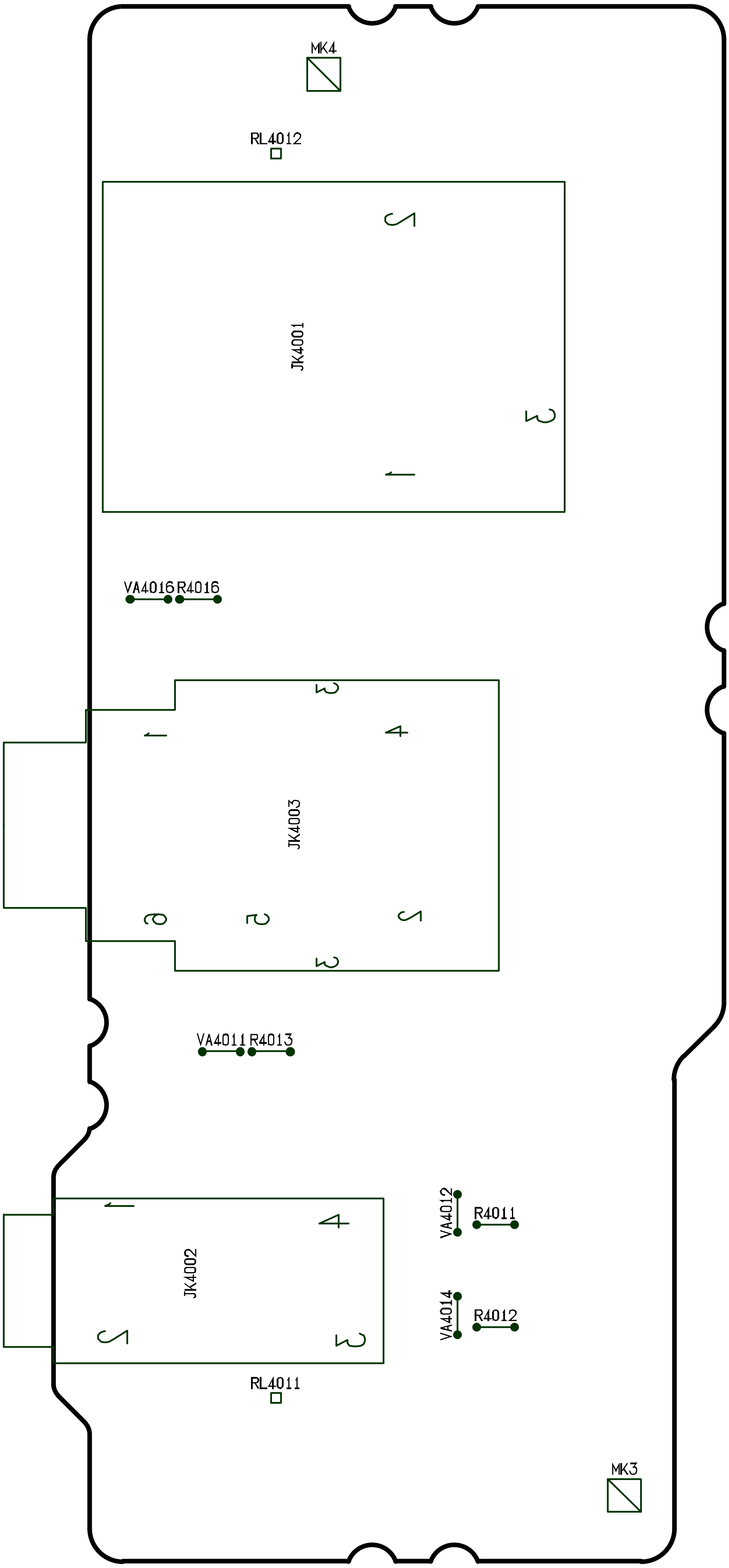
SD_HOLDER P.C.BOARD (COMPONENT SIDE)



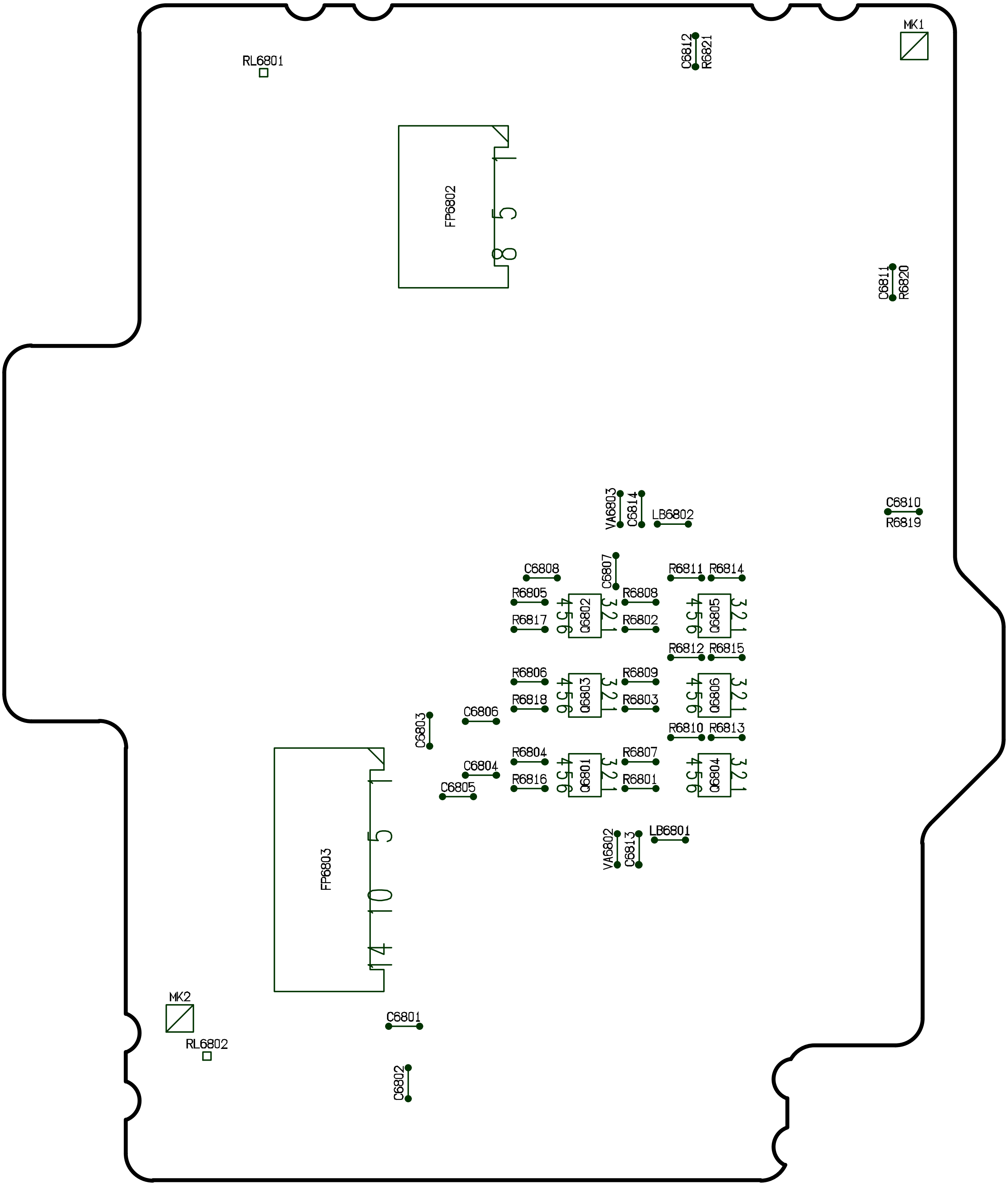
JACK_A_WIRED P.C.BOARD (FOIL SIDE)



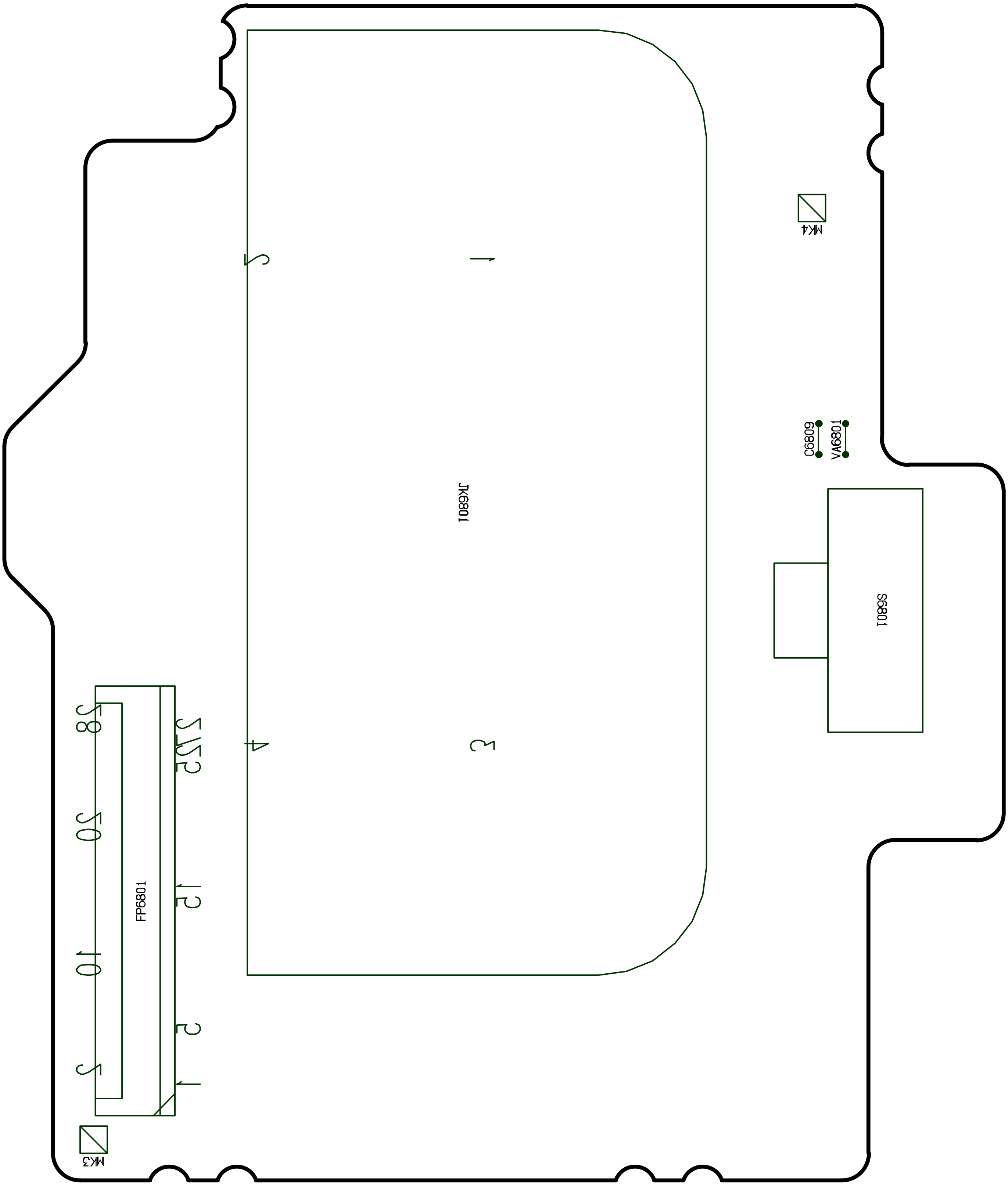
JACK_A_WIRED P.C.BOARD (COMPONENT SIDE)



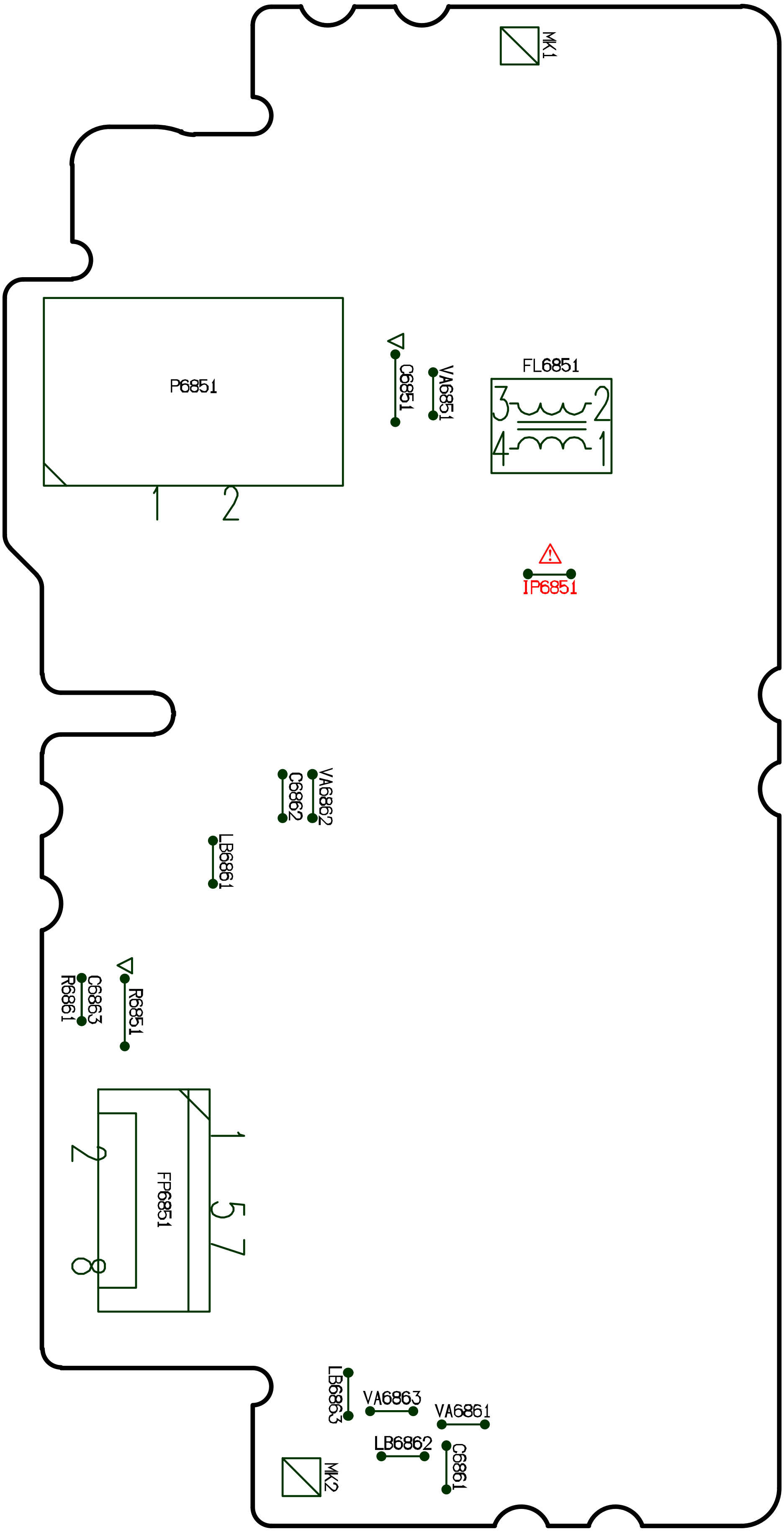
JACK_BNC P.C.BOARD (FOIL SIDE)



JACK_BNC P.C.BOARD (COMPONENT SIDE)



JACK_DC P.C.BOARD (FOIL SIDE)

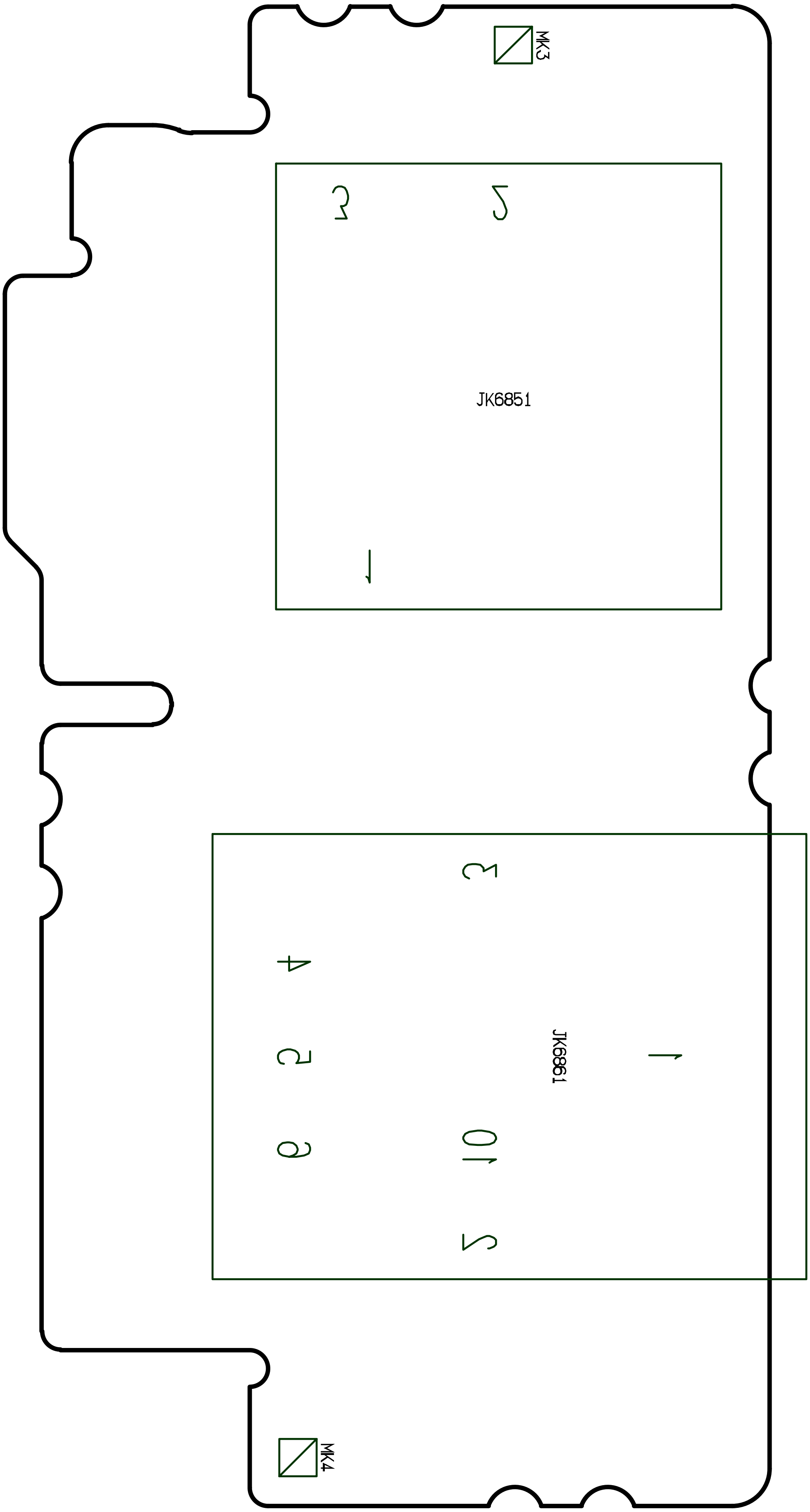


⚠ 警告

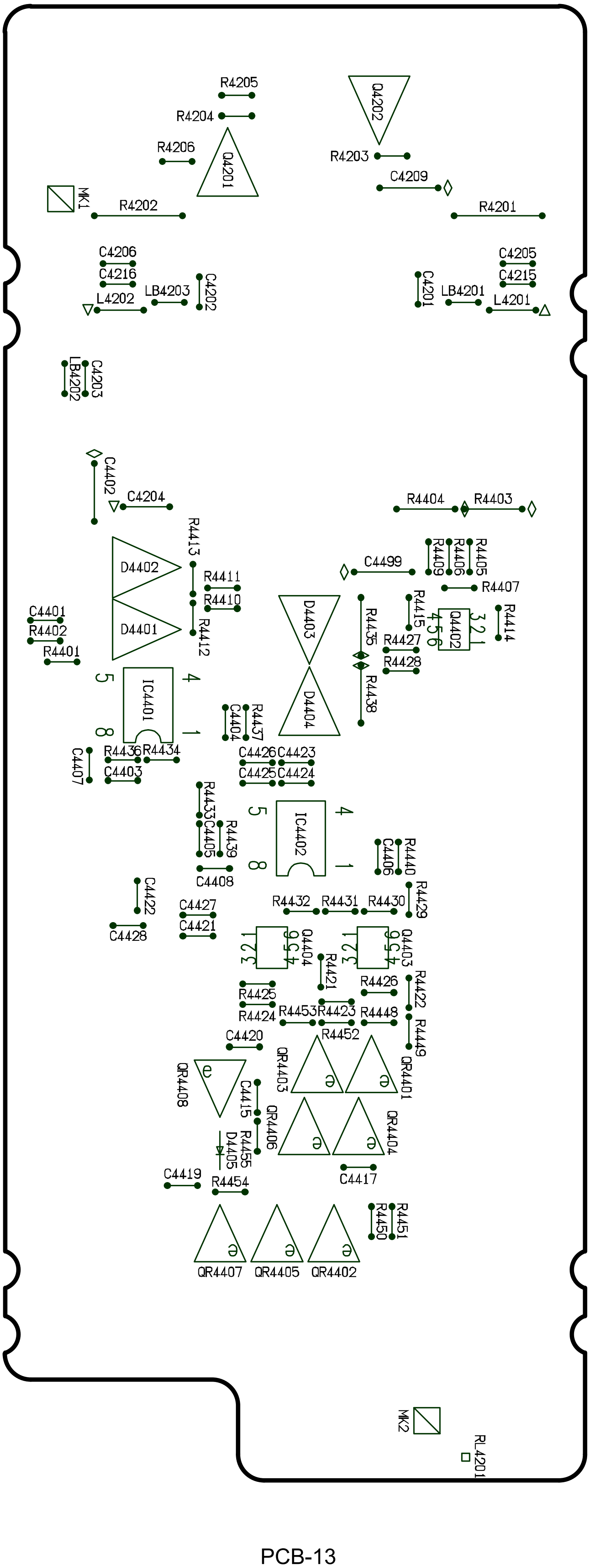
⚠印の部品は安全上重要な部品です。交換するときは、
安全および性能維持のため必ず指定の部品をご使用ください。

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

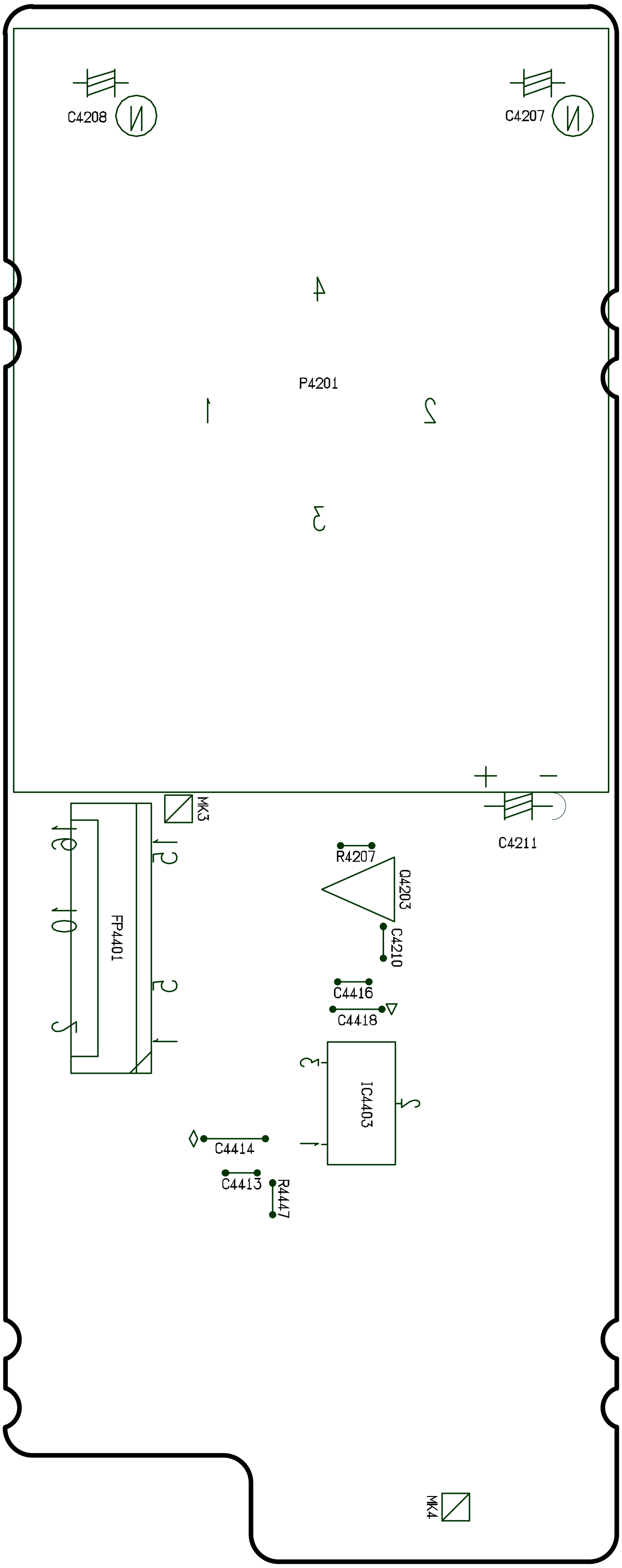
JACK_DC P.C.BOARD (COMPONENT SIDE)



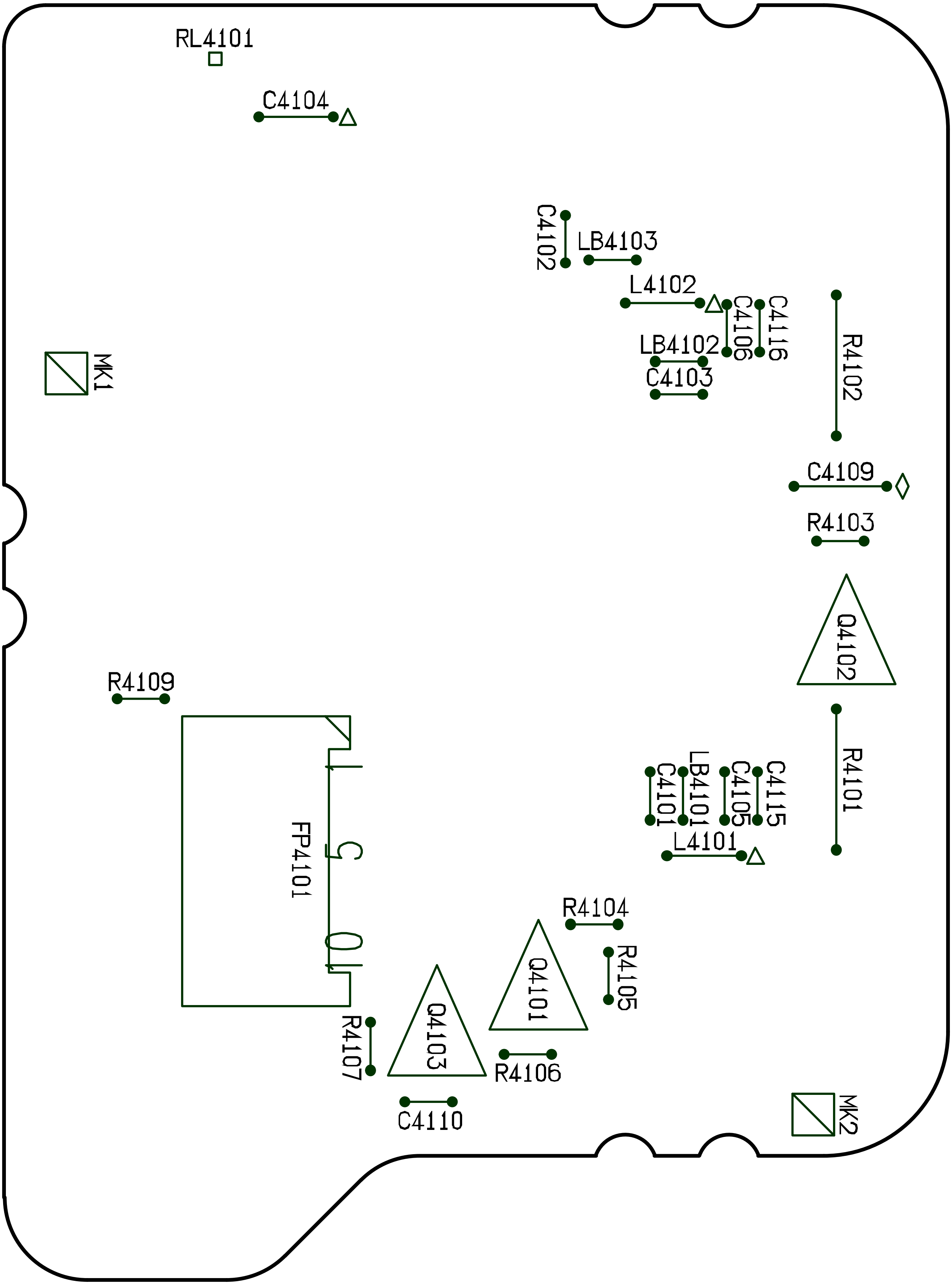
XLR_REAR P.C.BOARD (FOIL SIDE)



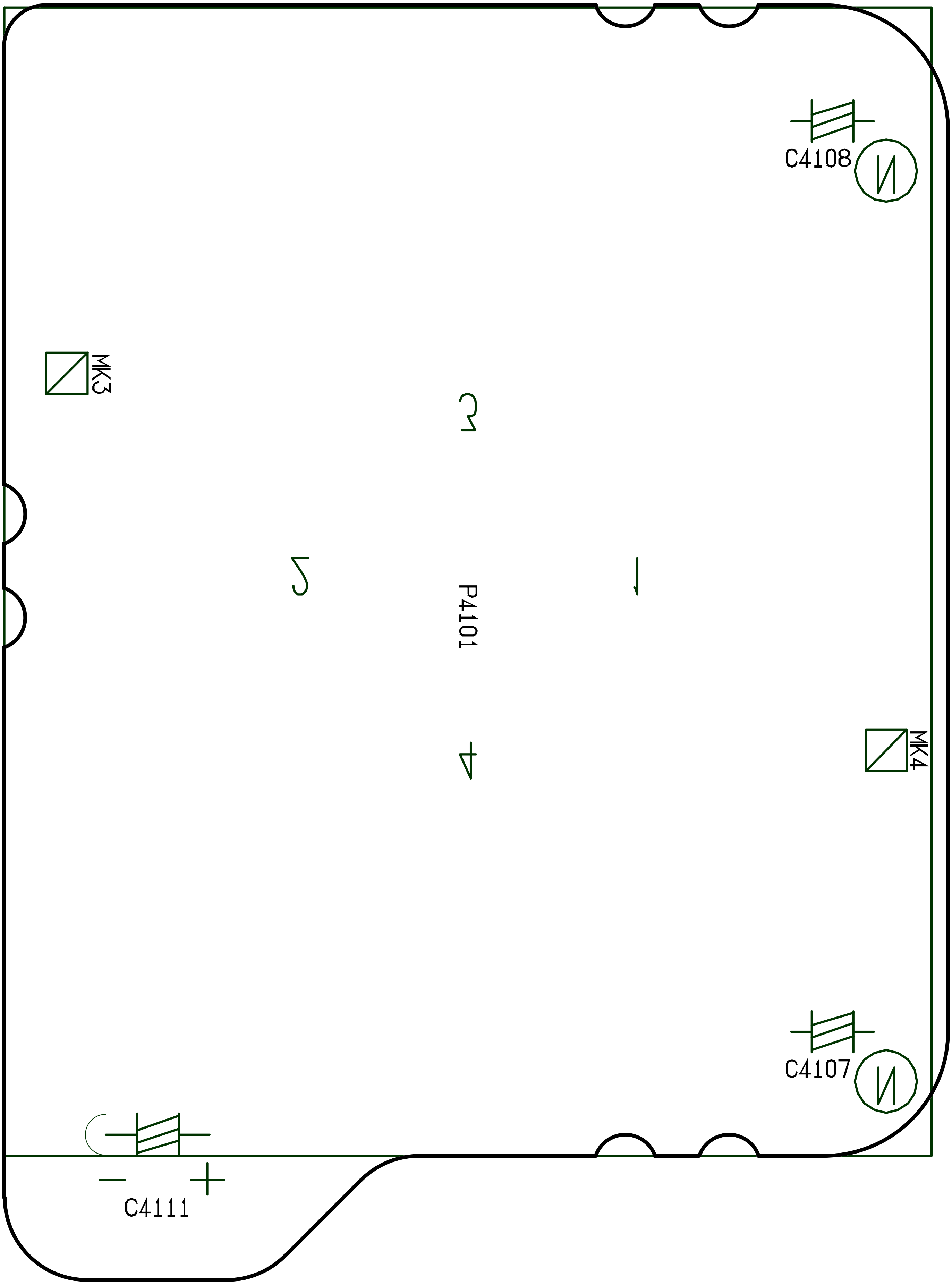
XLR_REAR P.C.BOARD (COMPONENT SIDE)



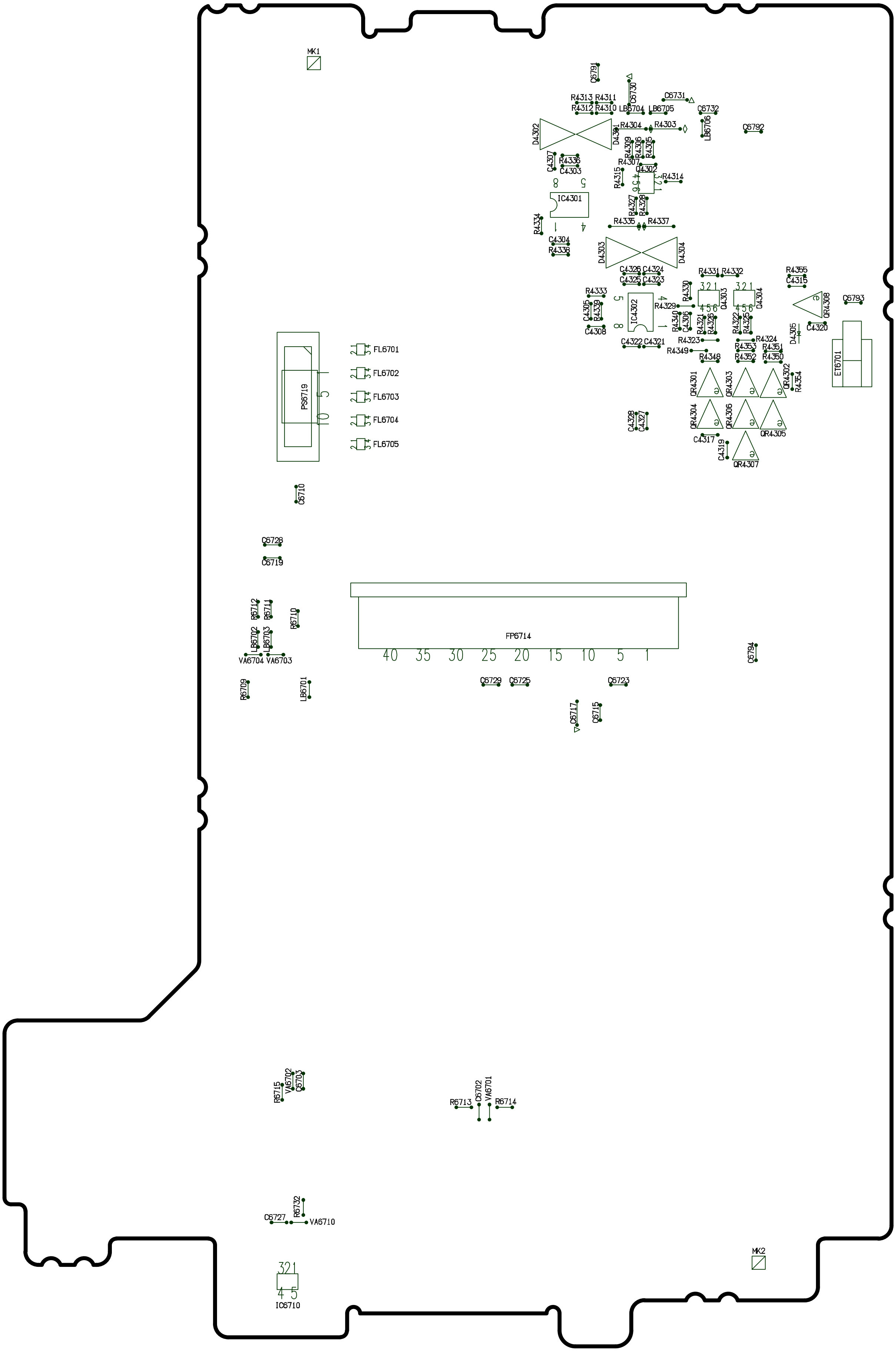
XLR_FRONT P.C.BOARD (FOIL SIDE)



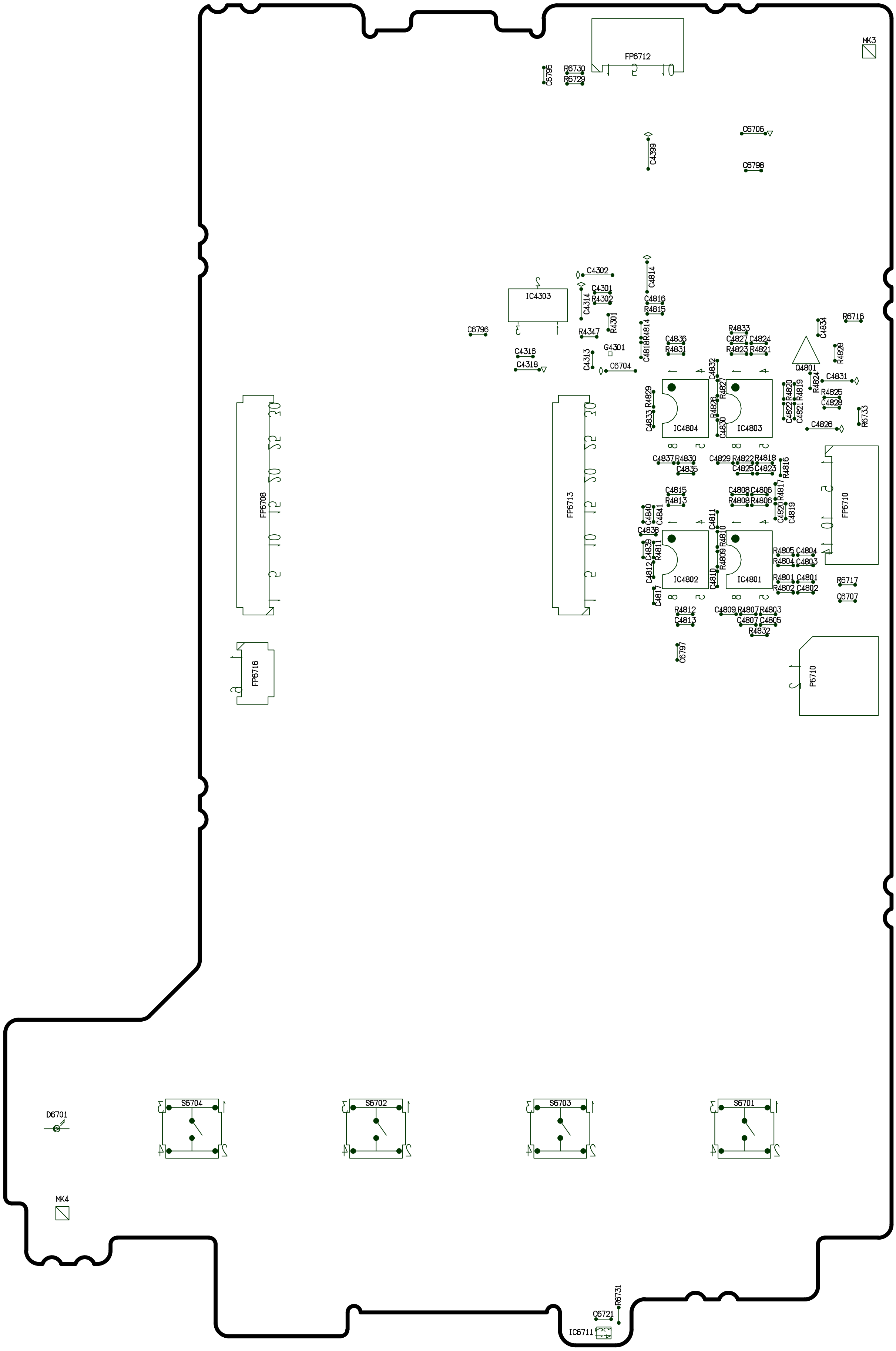
XLR_FRONT P.C.BOARD (COMPONENT SIDE)



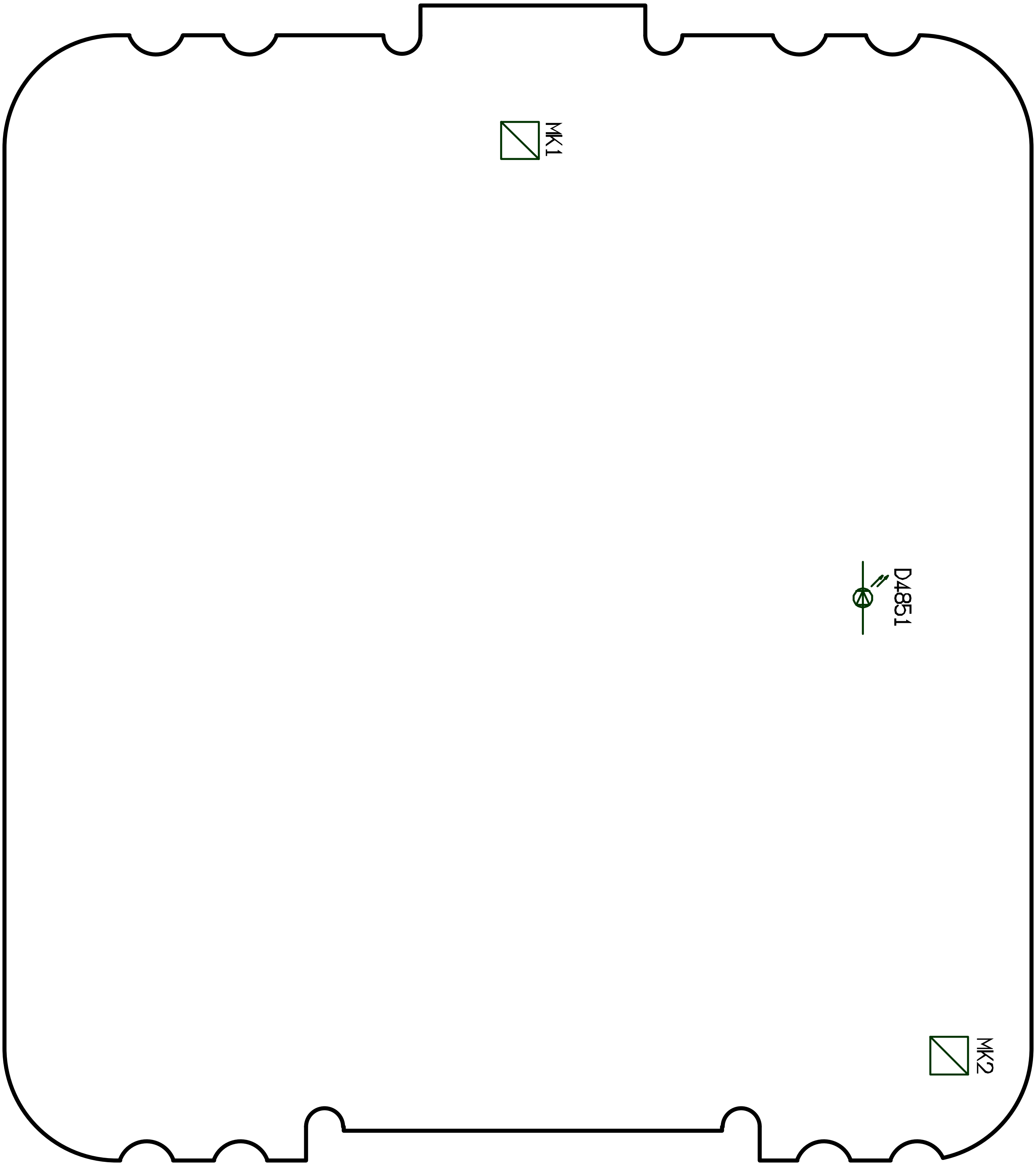
HANDLE_OP P.C.BOARD (FOIL SIDE)



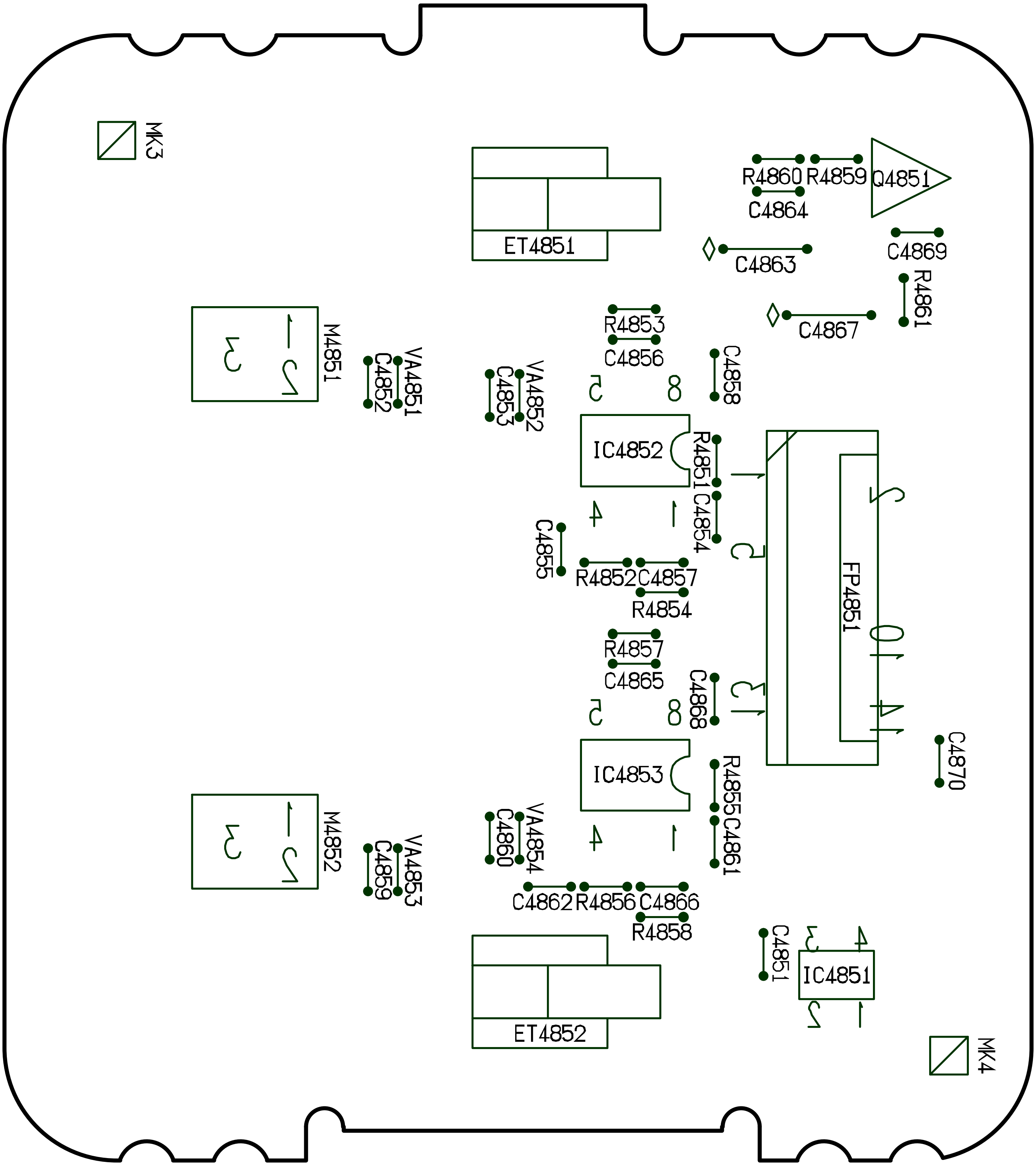
HANDLE_OP P.C.BOARD (COMPONENT SIDE)



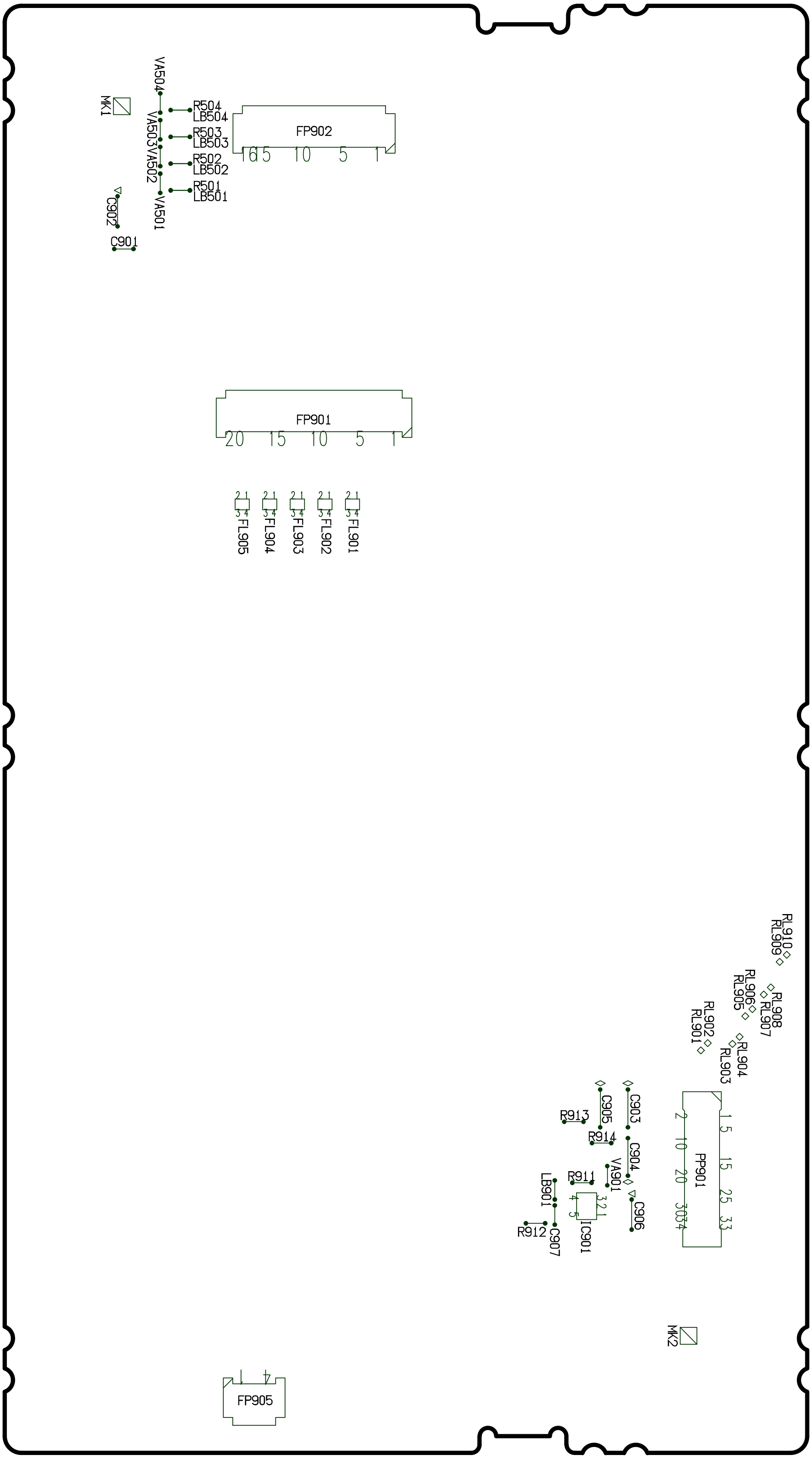
MEMS_MIC P.C.BOARD (FOIL SIDE)



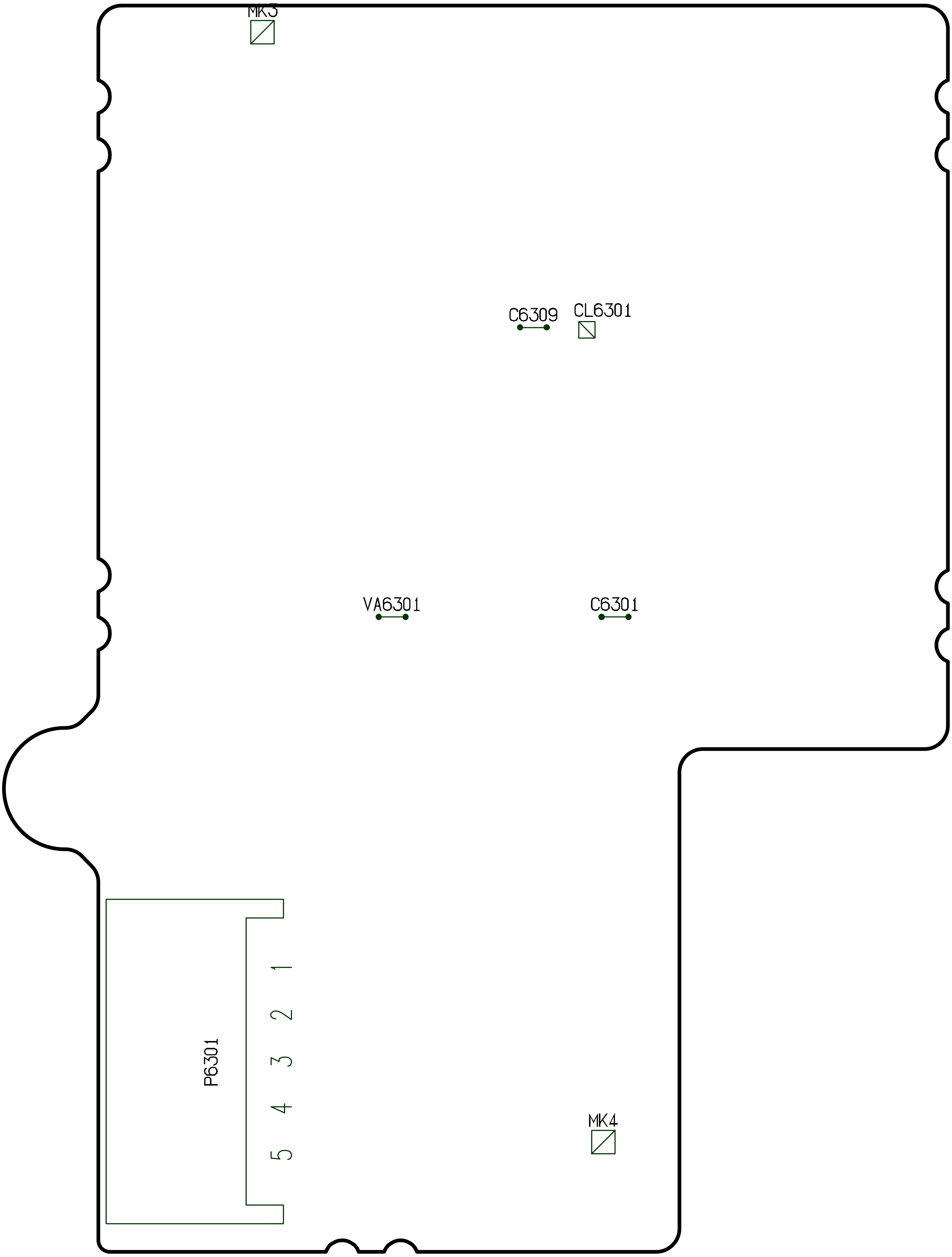
MEMS_MIC P.C.BOARD (COMPONENT SIDE)



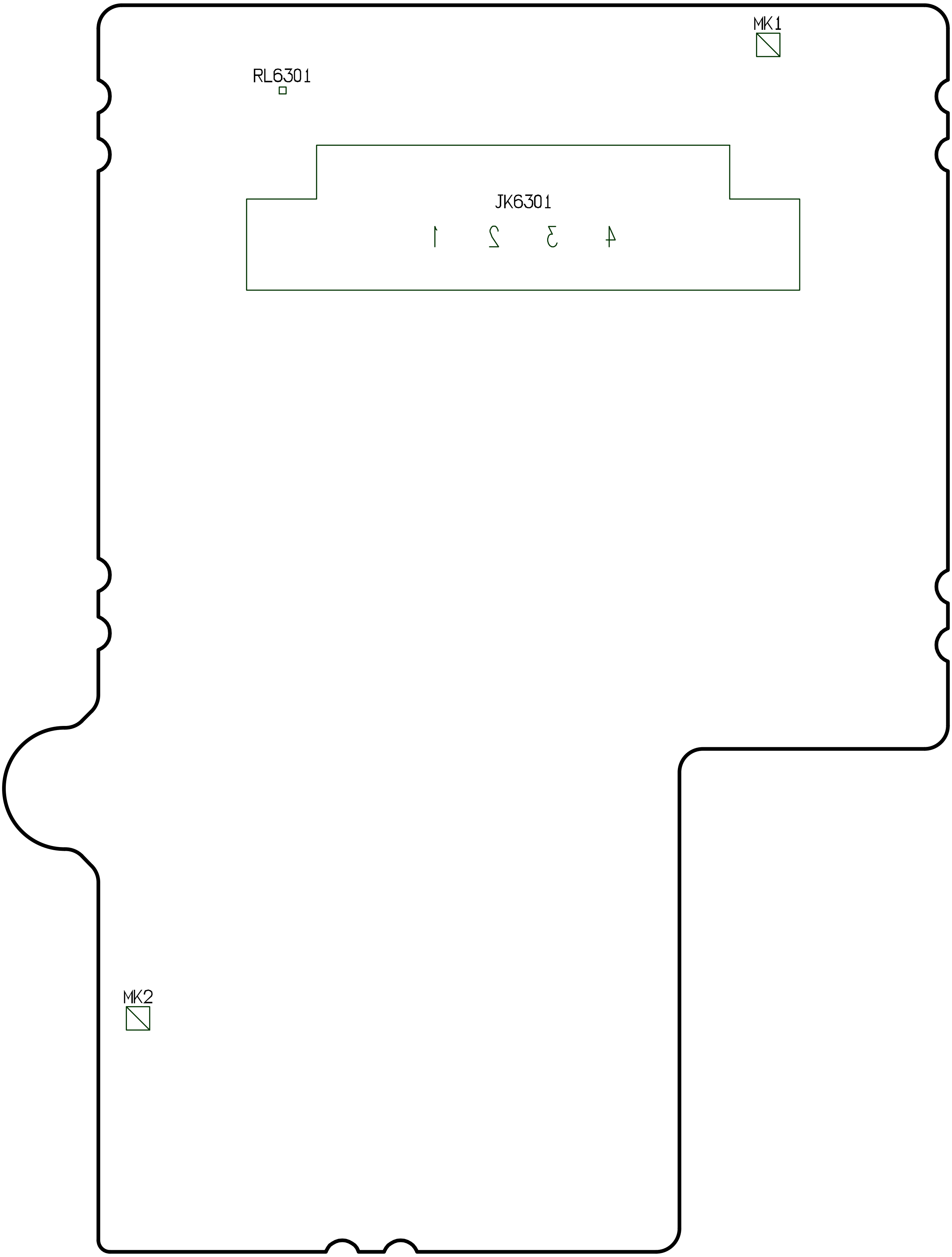
MONITOR P.C.BOARD (FOIL SIDE)



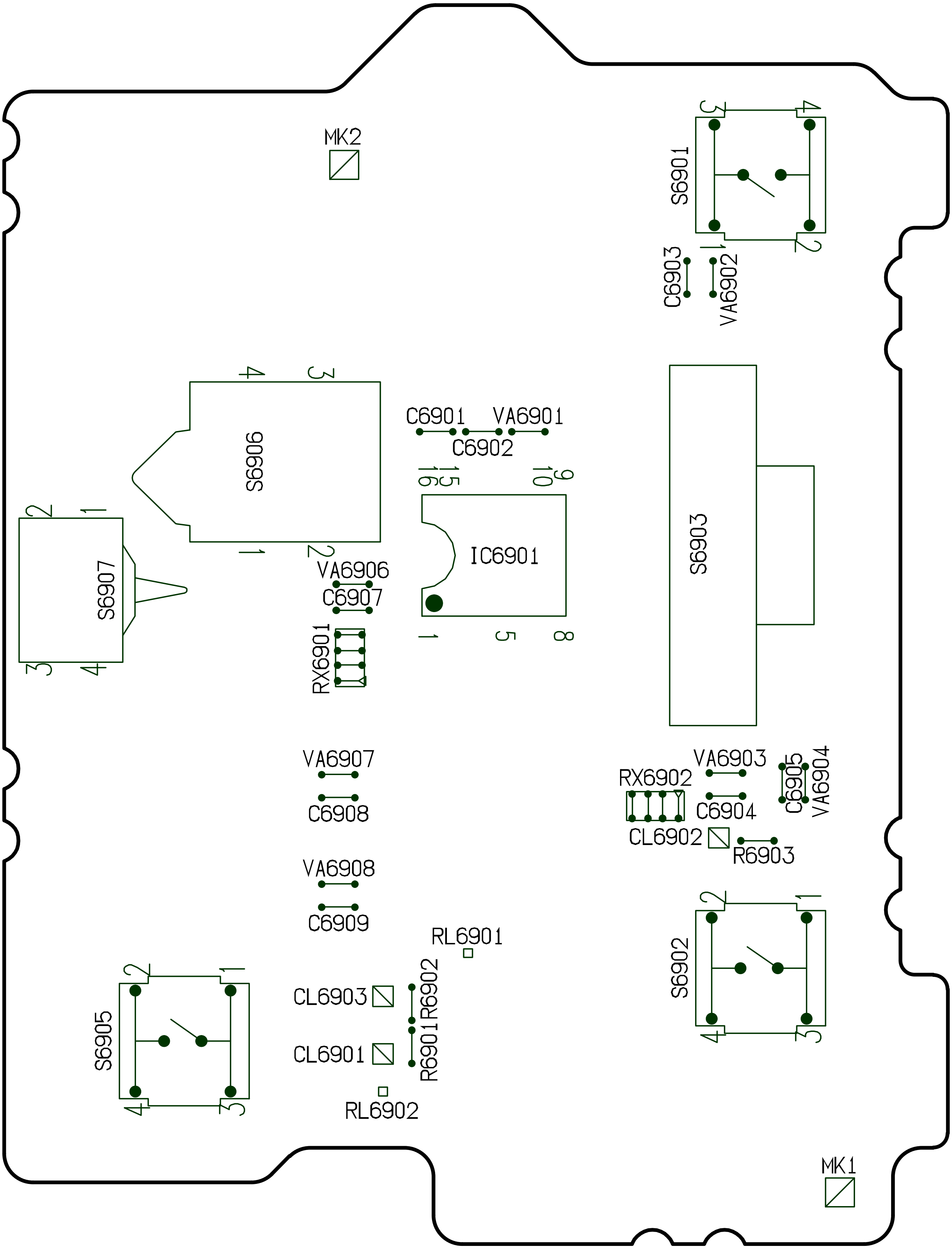
BATT_CATCHER P.C.BOARD (FOIL SIDE)



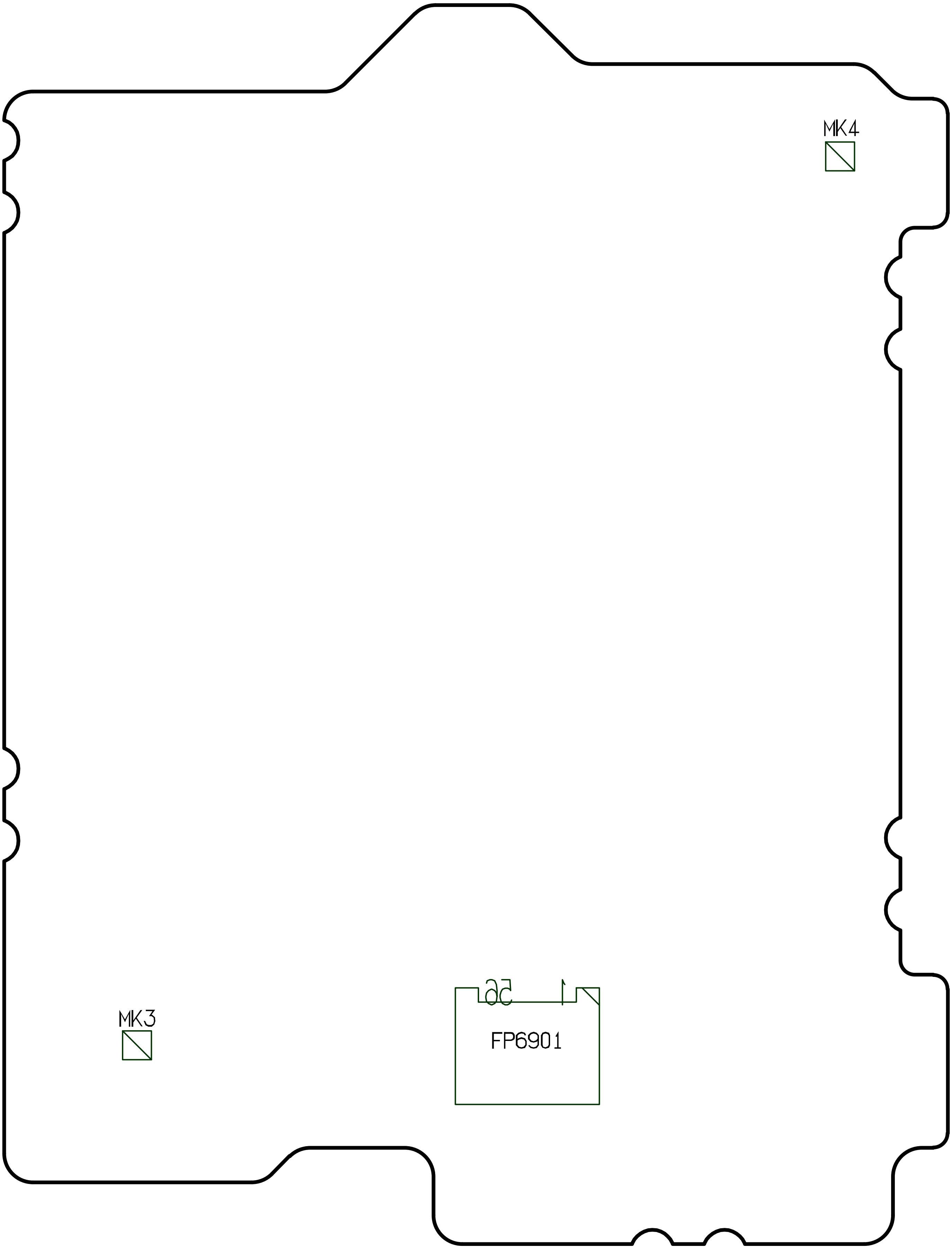
BATT_CATCHER P.C.BOARD (COMPONENT SIDE)



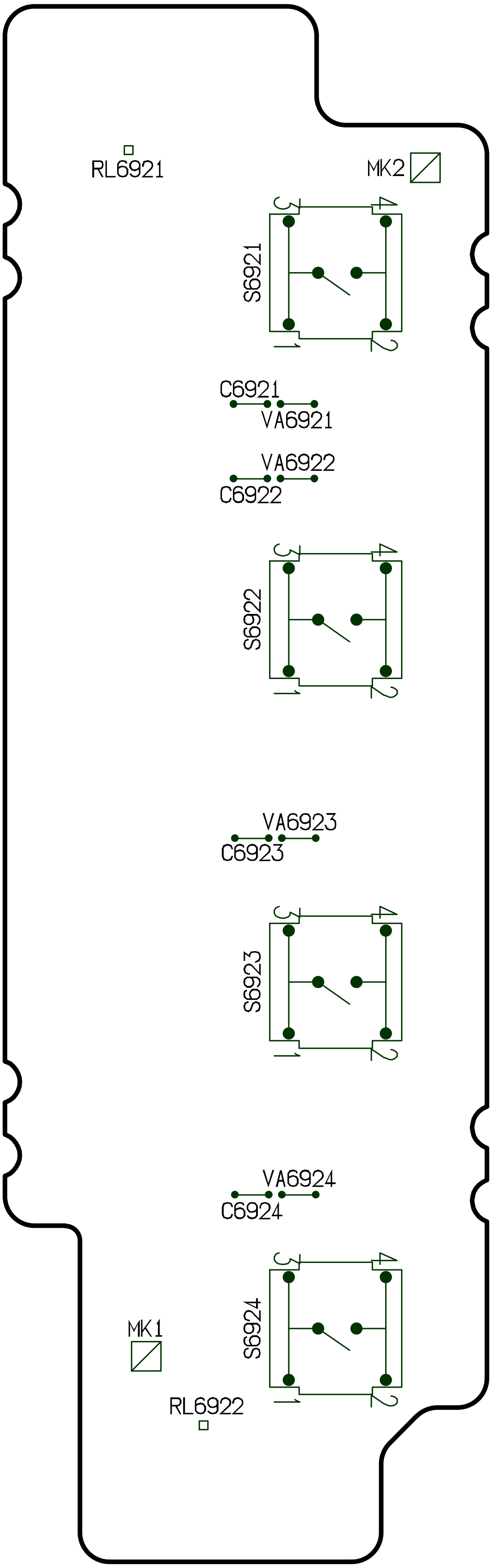
OP_CAM P.C.BOARD (FOIL SIDE)



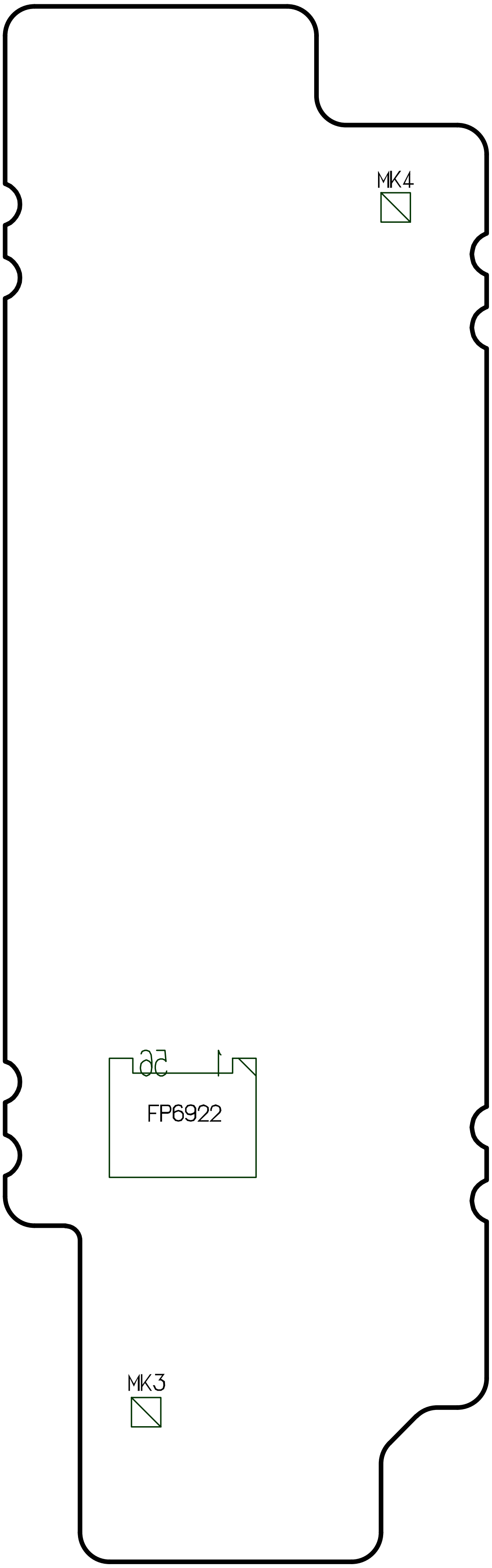
OP_CAM P.C.BOARD (COMPONENT SIDE)



OP_USER P.C.BOARD

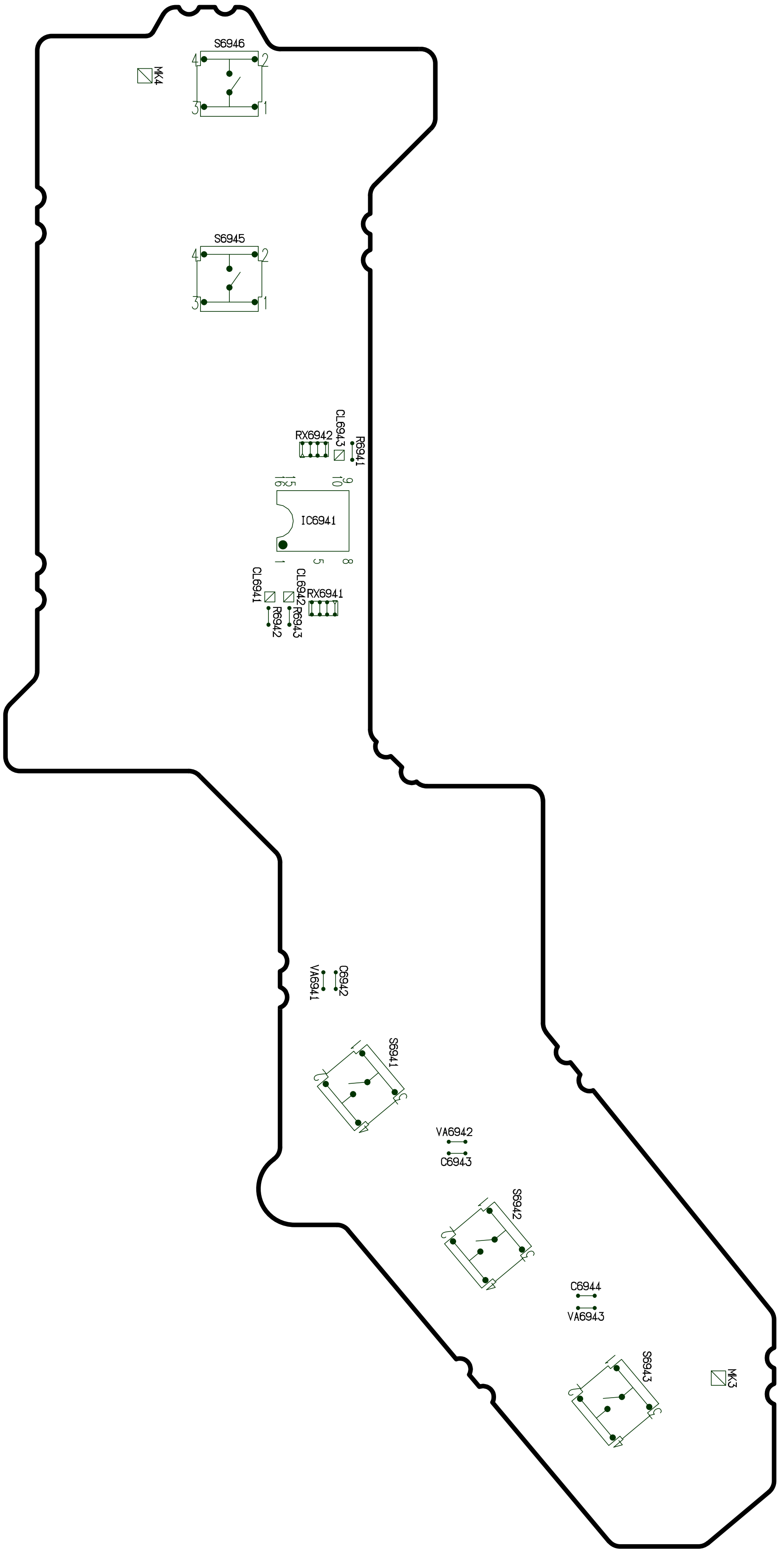


(FOIL SIDE)

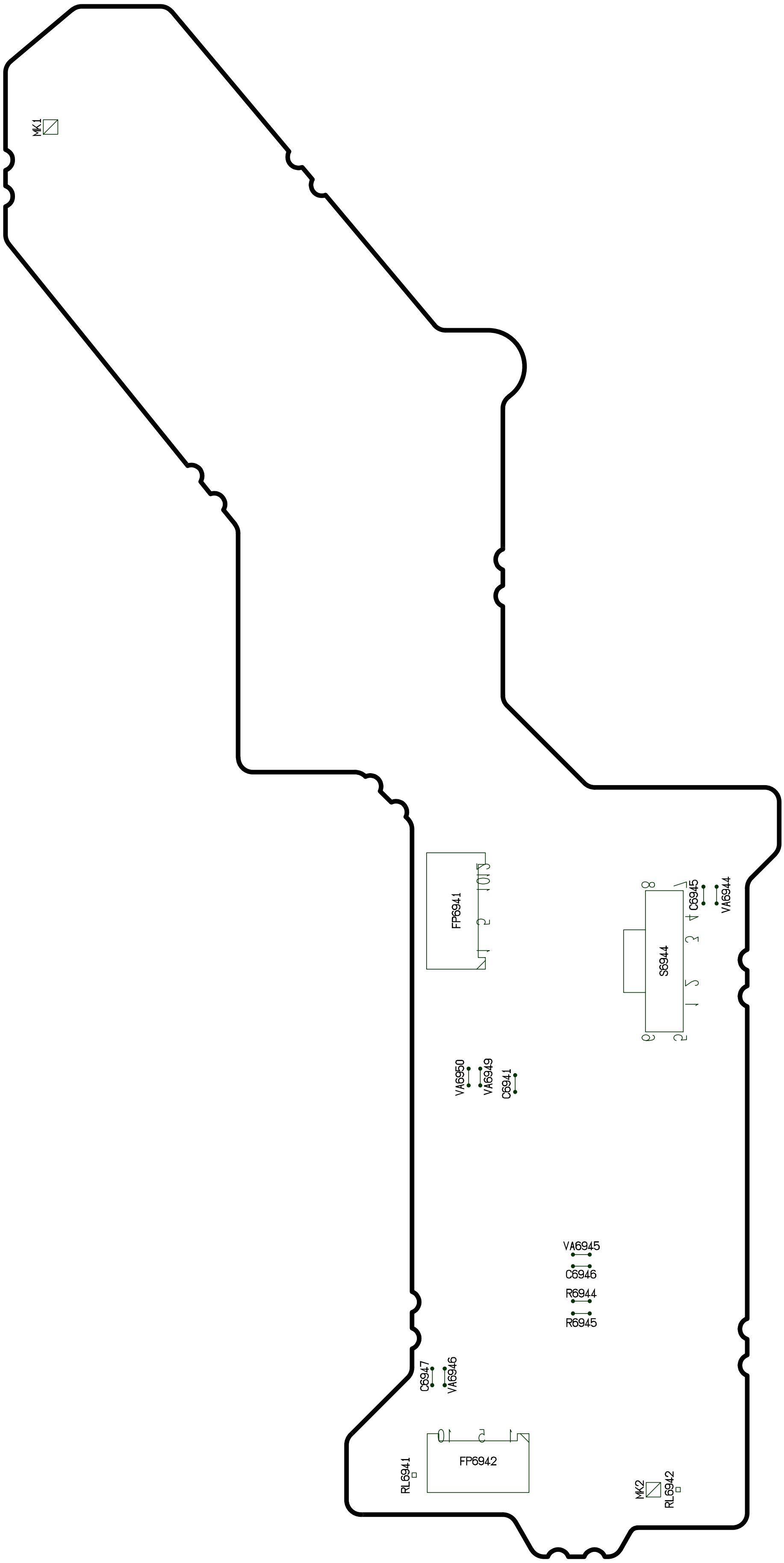


(COMPONENT SIDE)

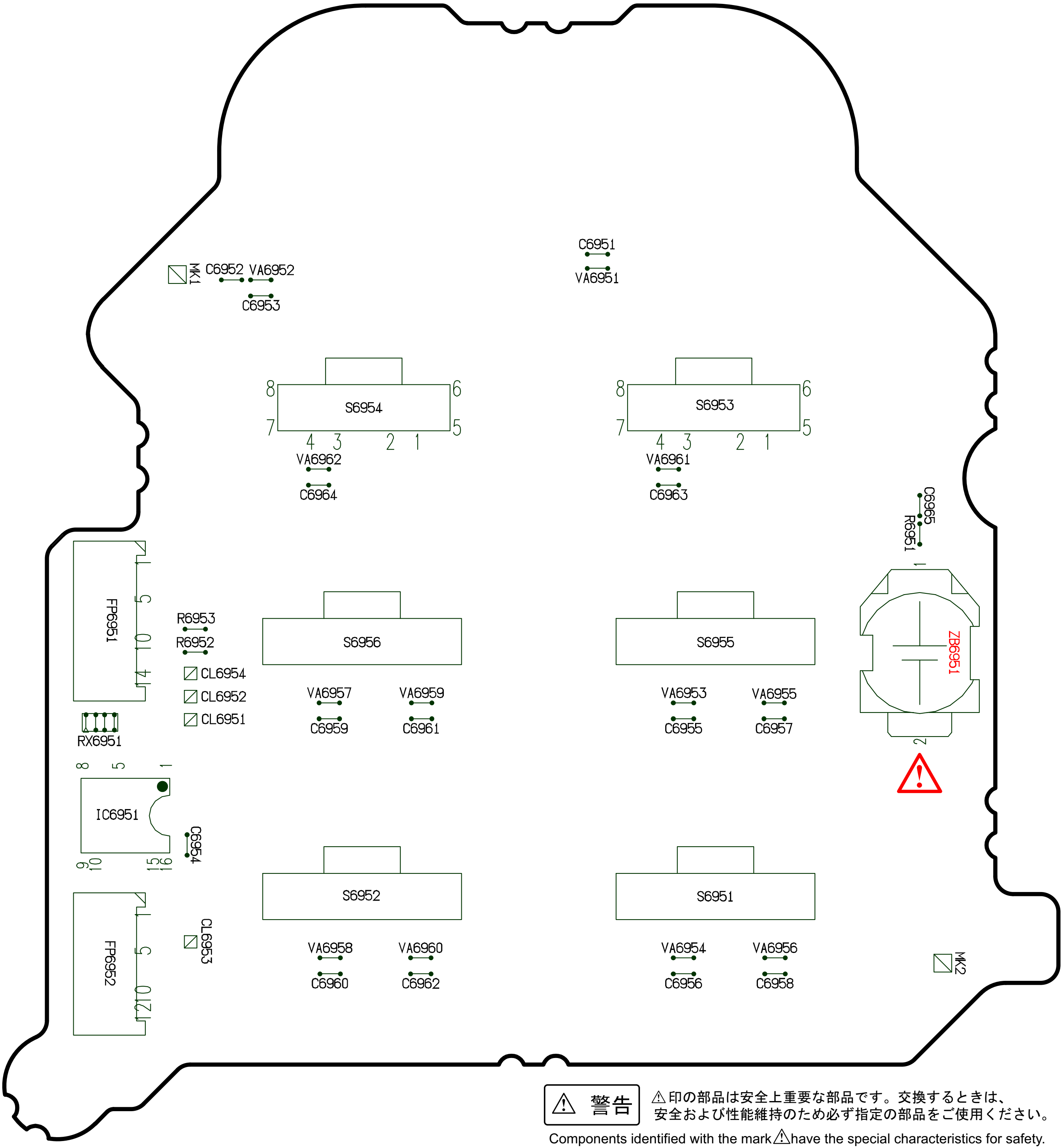
OP_MENU P.C.BOARD (FOIL SIDE)



OP_MENU P.C.BOARD (COMPONENT SIDE)



OP_AUDIO P.C.BOARD (FOIL SIDE)

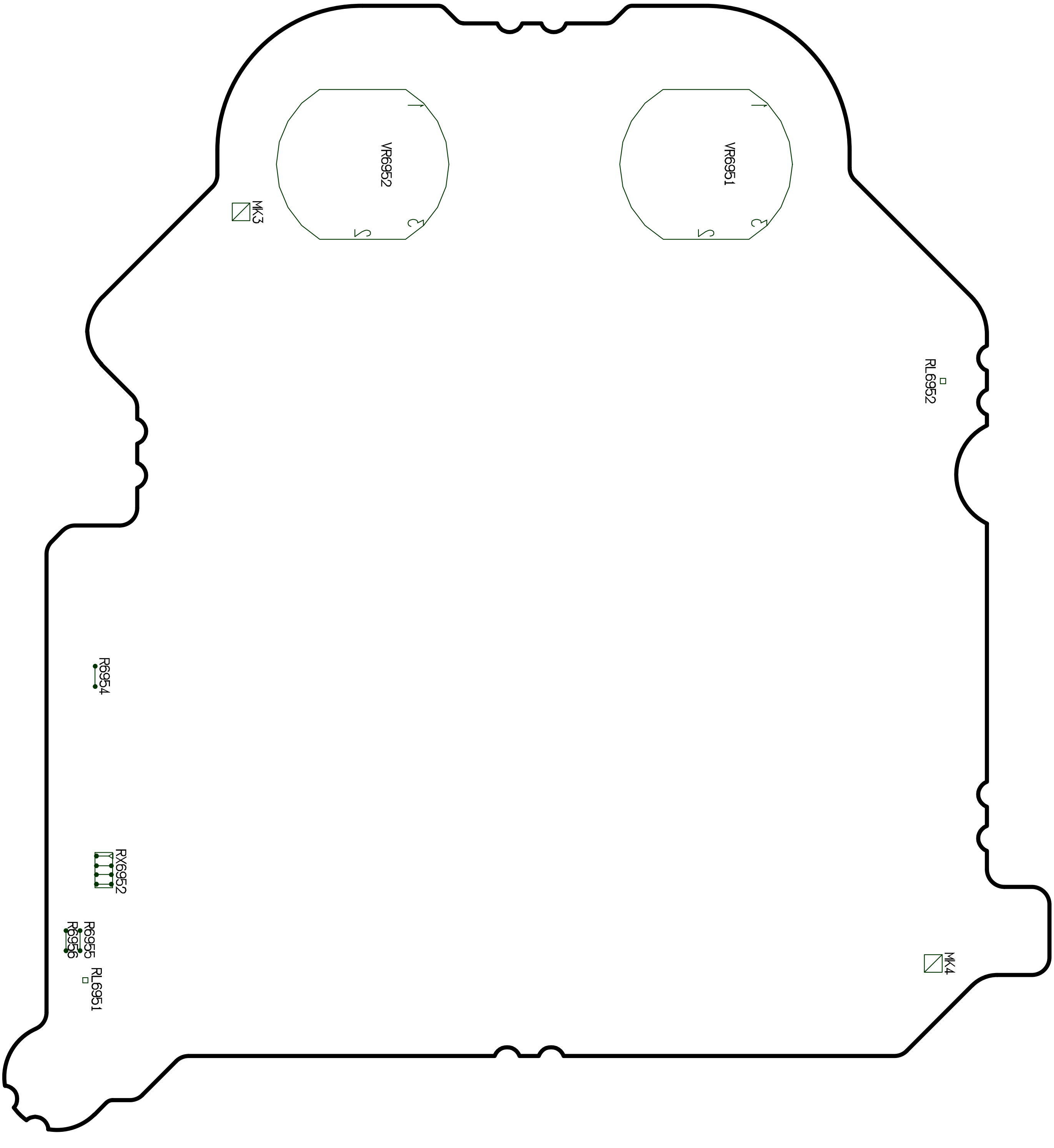


⚠ 警告

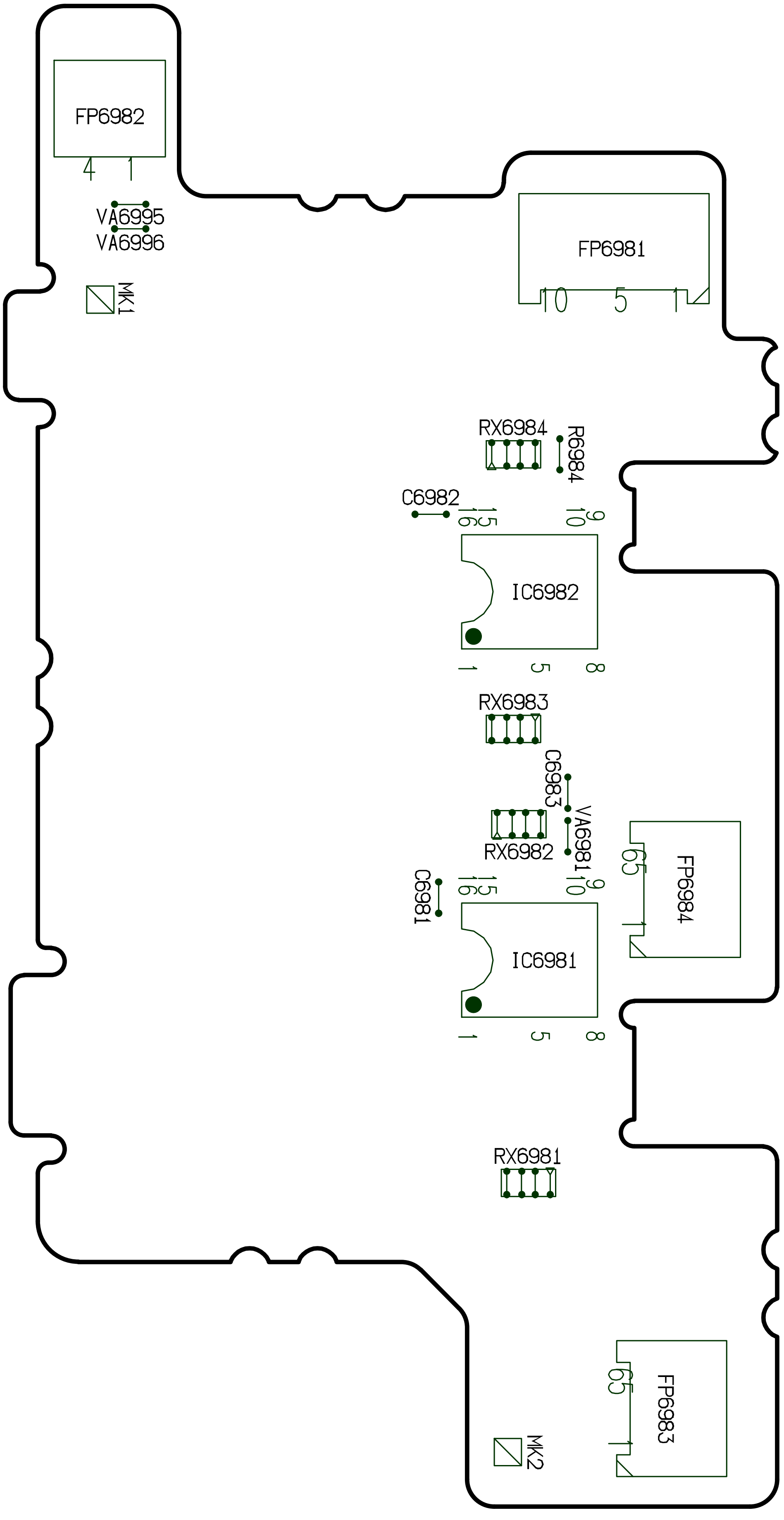
⚠印の部品は安全上重要な部品です。交換するときは、
安全および性能維持のため必ず指定の部品をご使用ください。

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

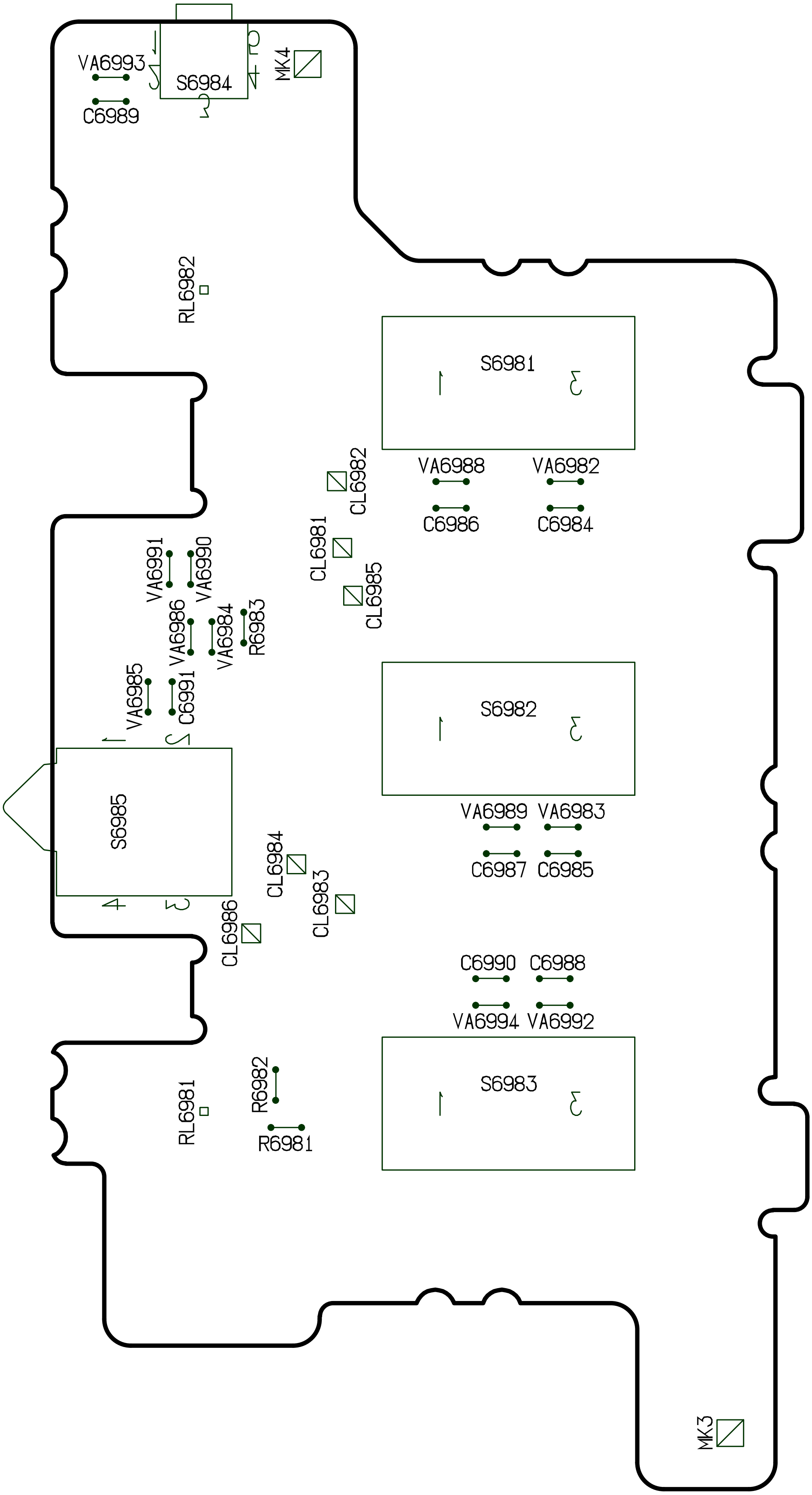
OP_AUDIO P.C.BOARD (COMPONENT SIDE)



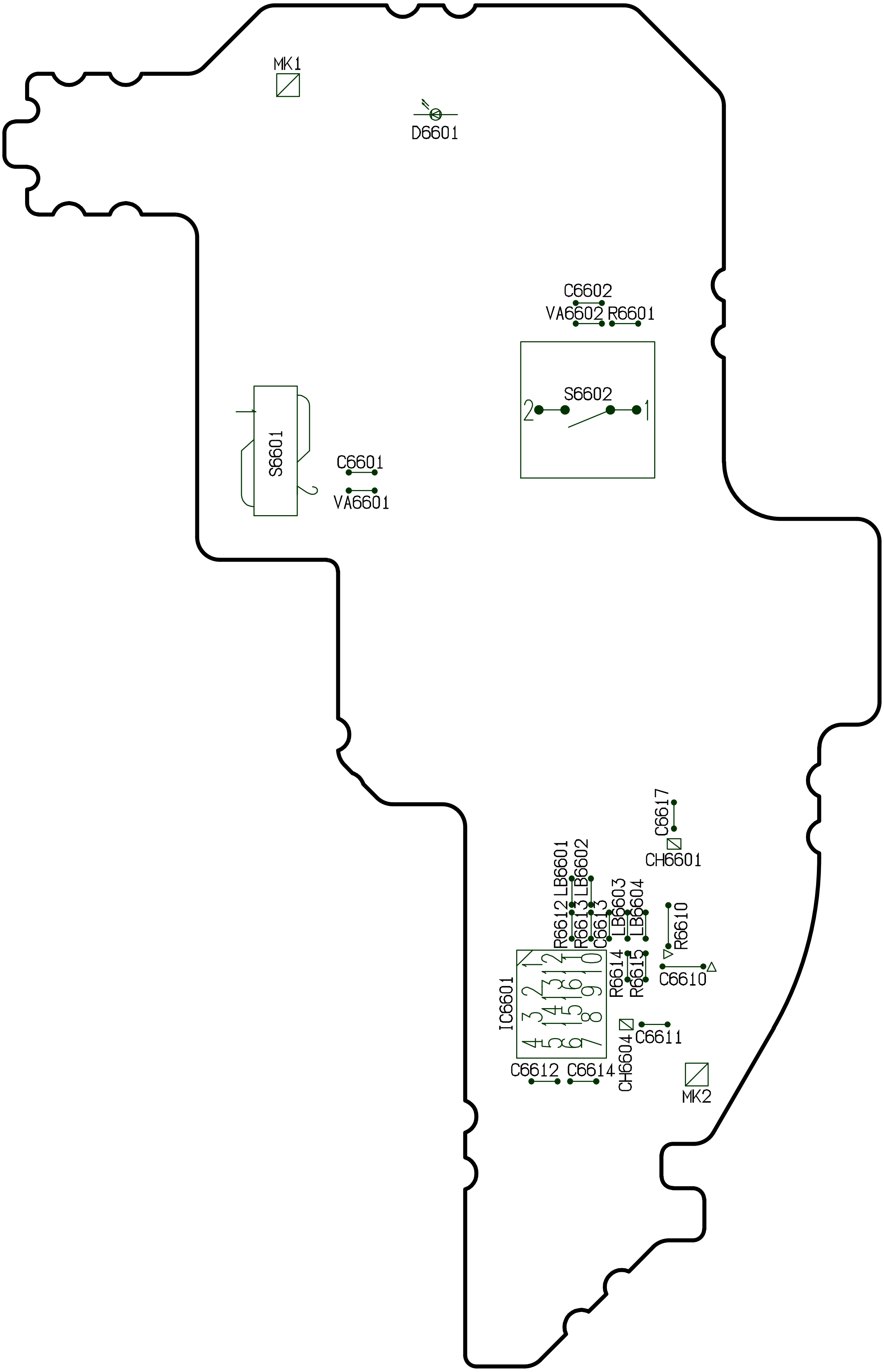
OP_TOGGLE P.C.BOARD (FOIL SIDE)



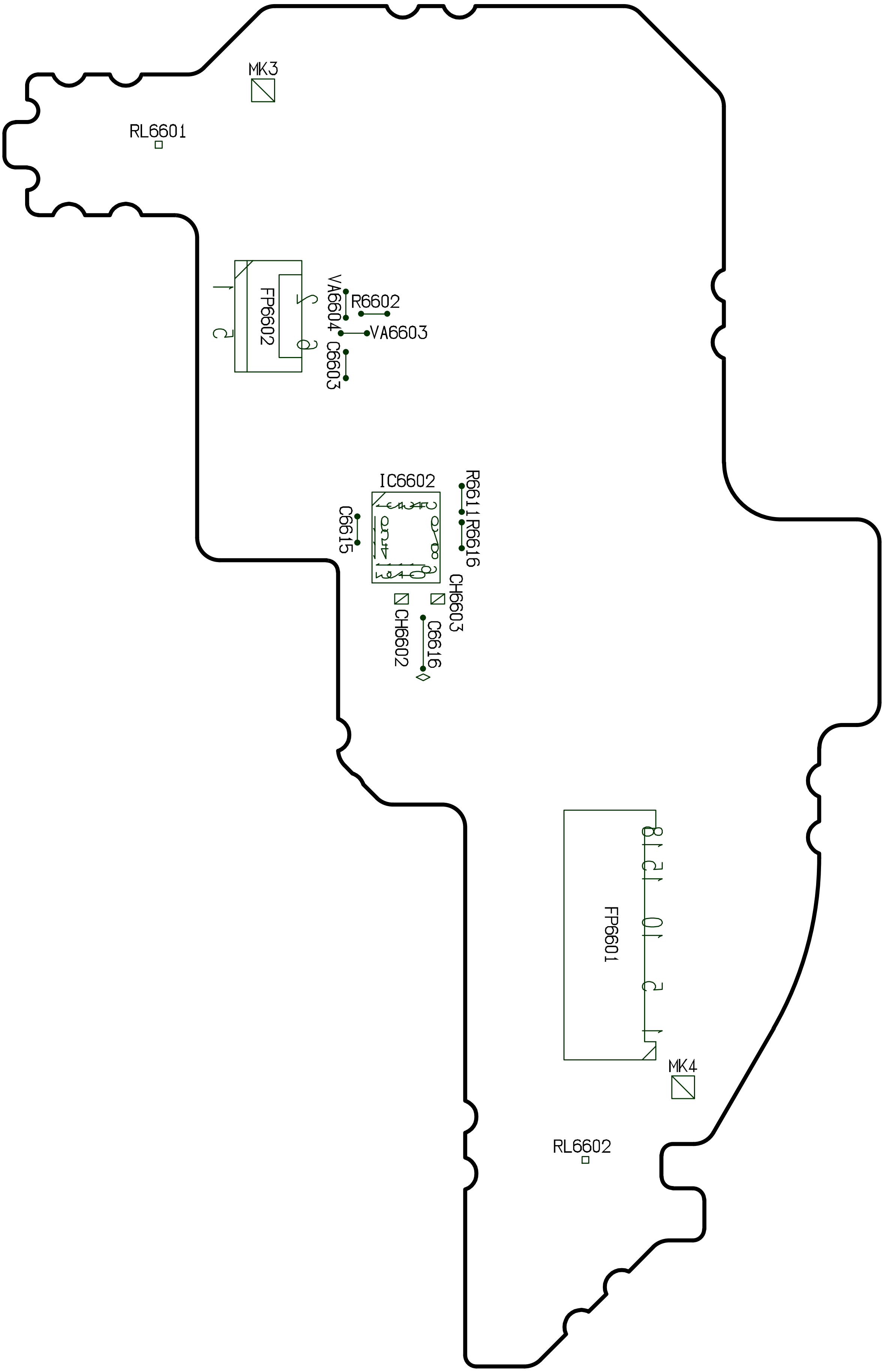
OP_TOGGLE P.C.BOARD (COMPONENT SIDE)



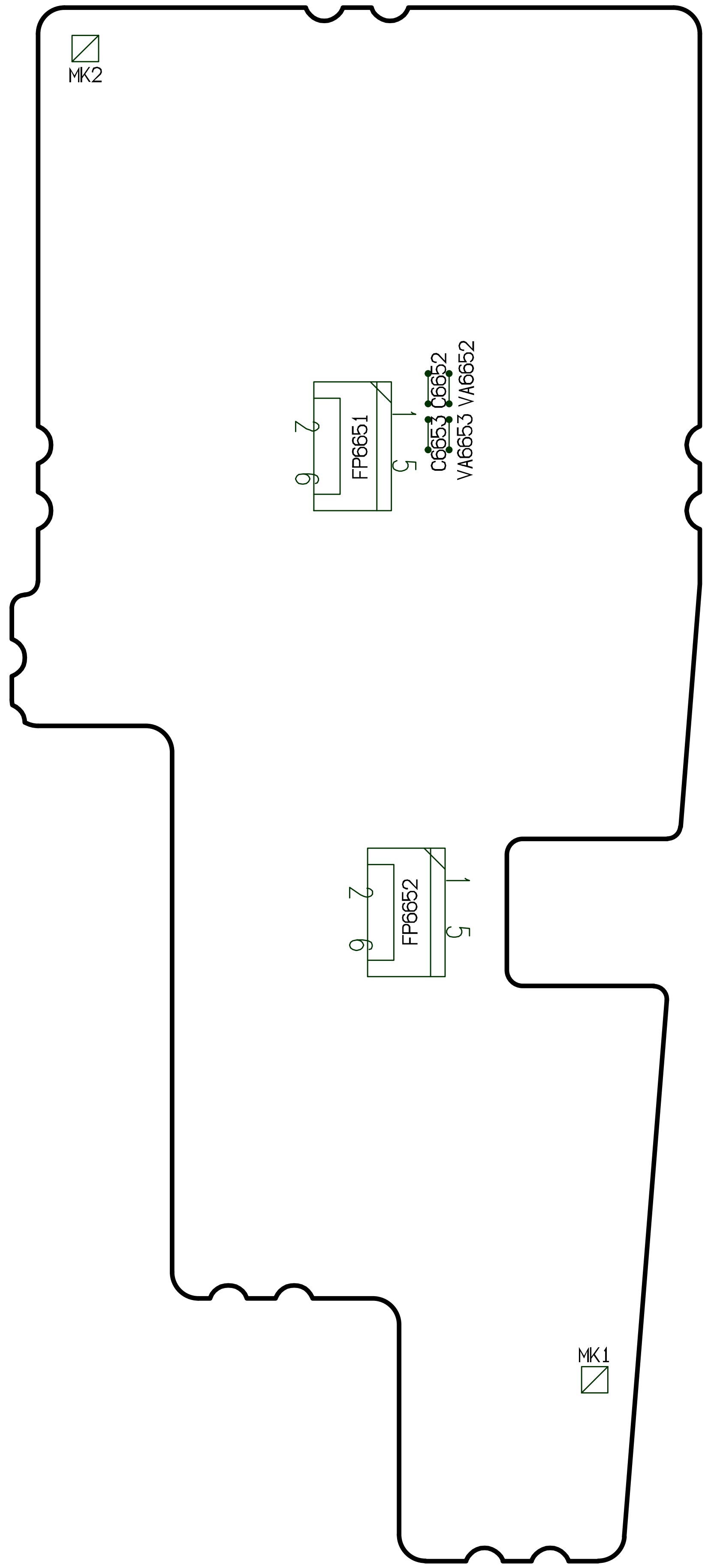
SS_GYRO P.C.BOARD (FOIL SIDE)



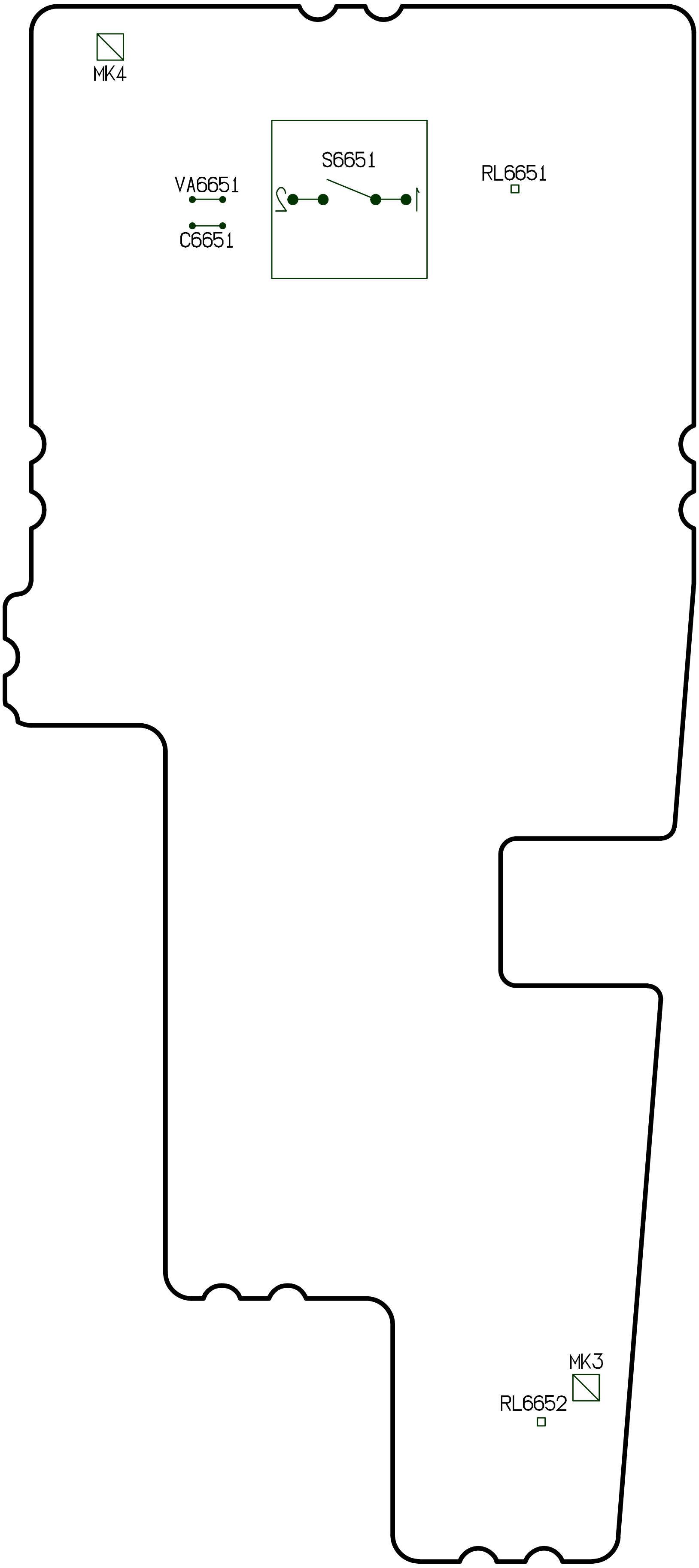
SS_GYRO P.C.BOARD (COMPONENT SIDE)



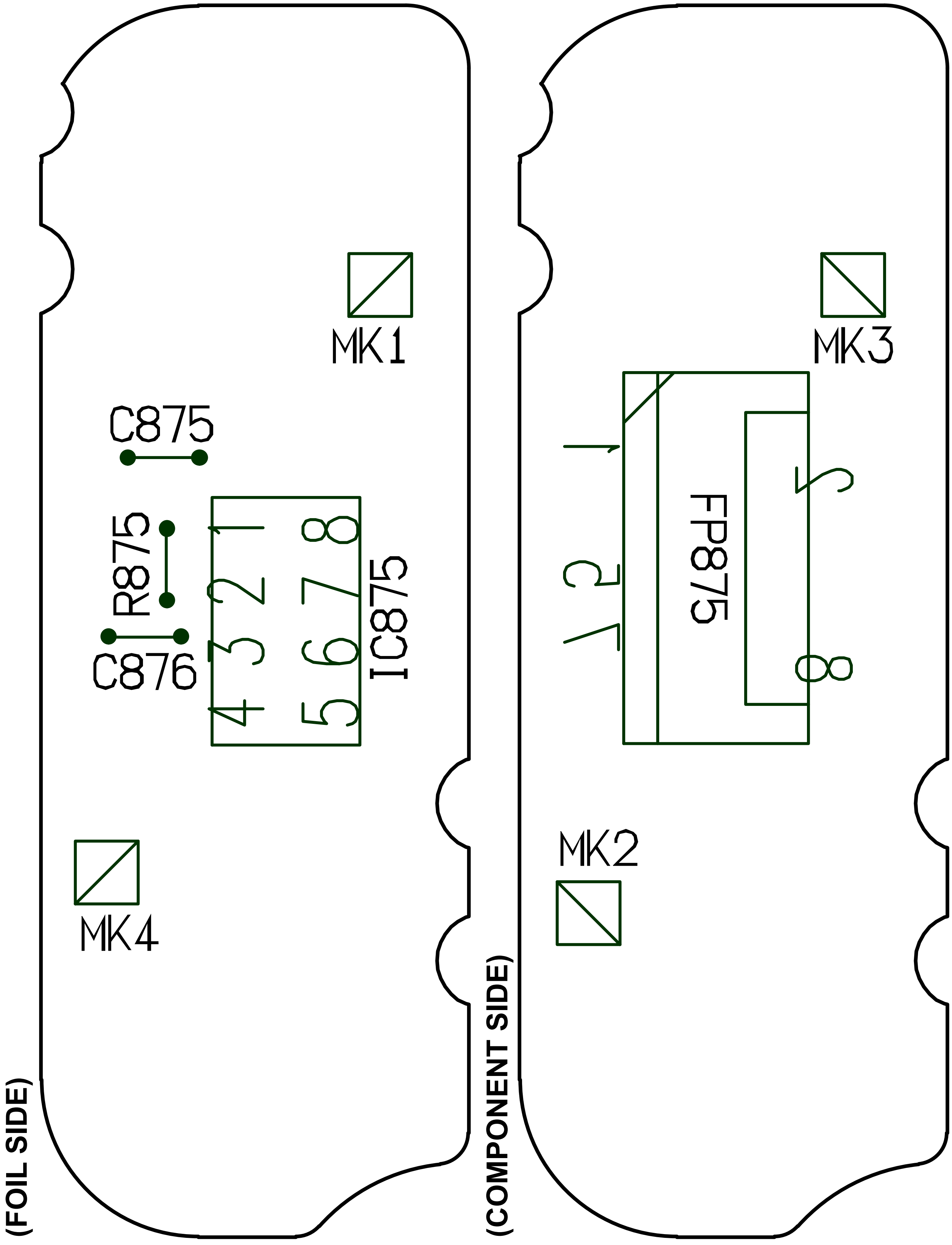
GRIP_ZOOM P.C.BOARD (FOIL SIDE)



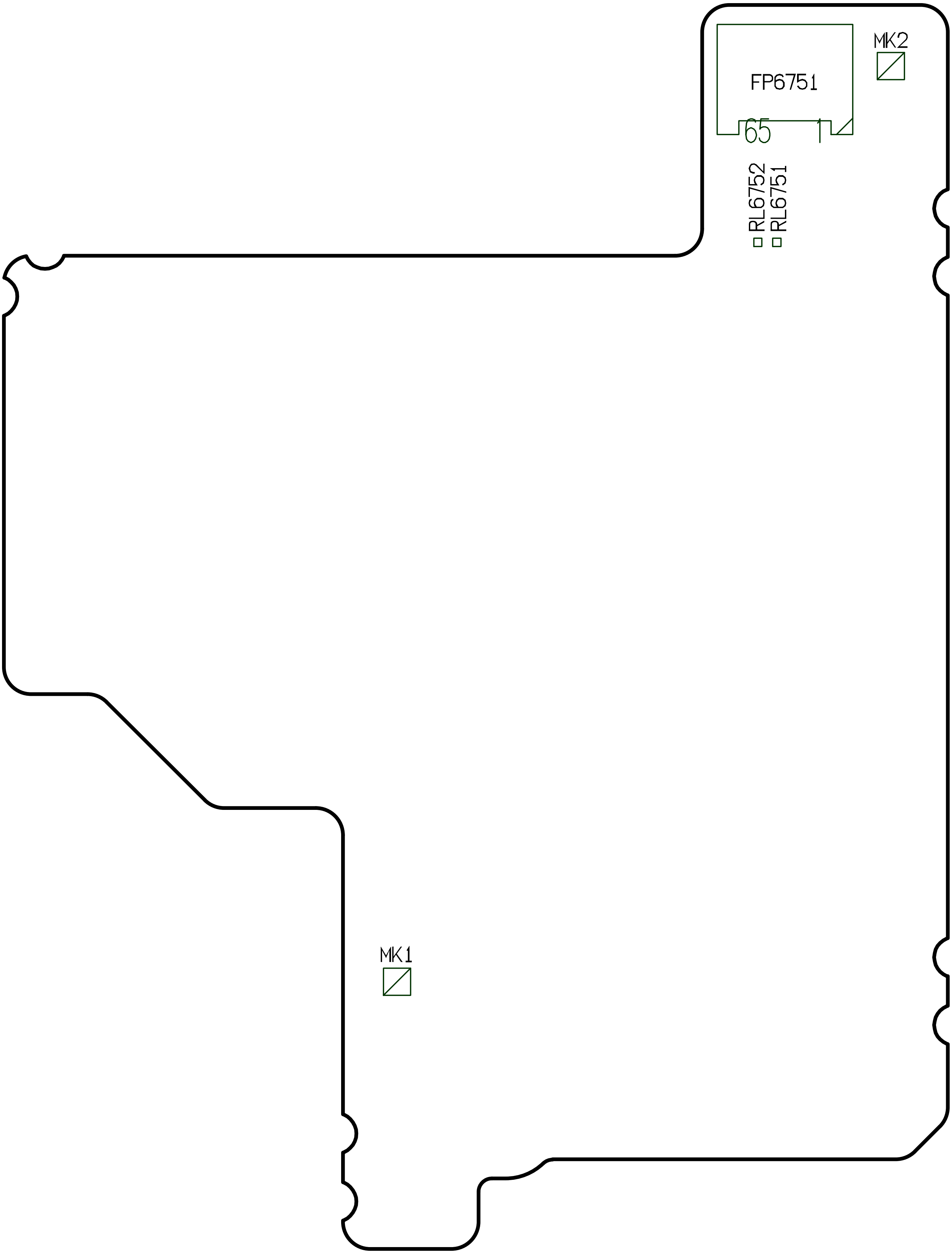
GRIP_ZOOM P.C.BOARD (COMPONENT SIDE)



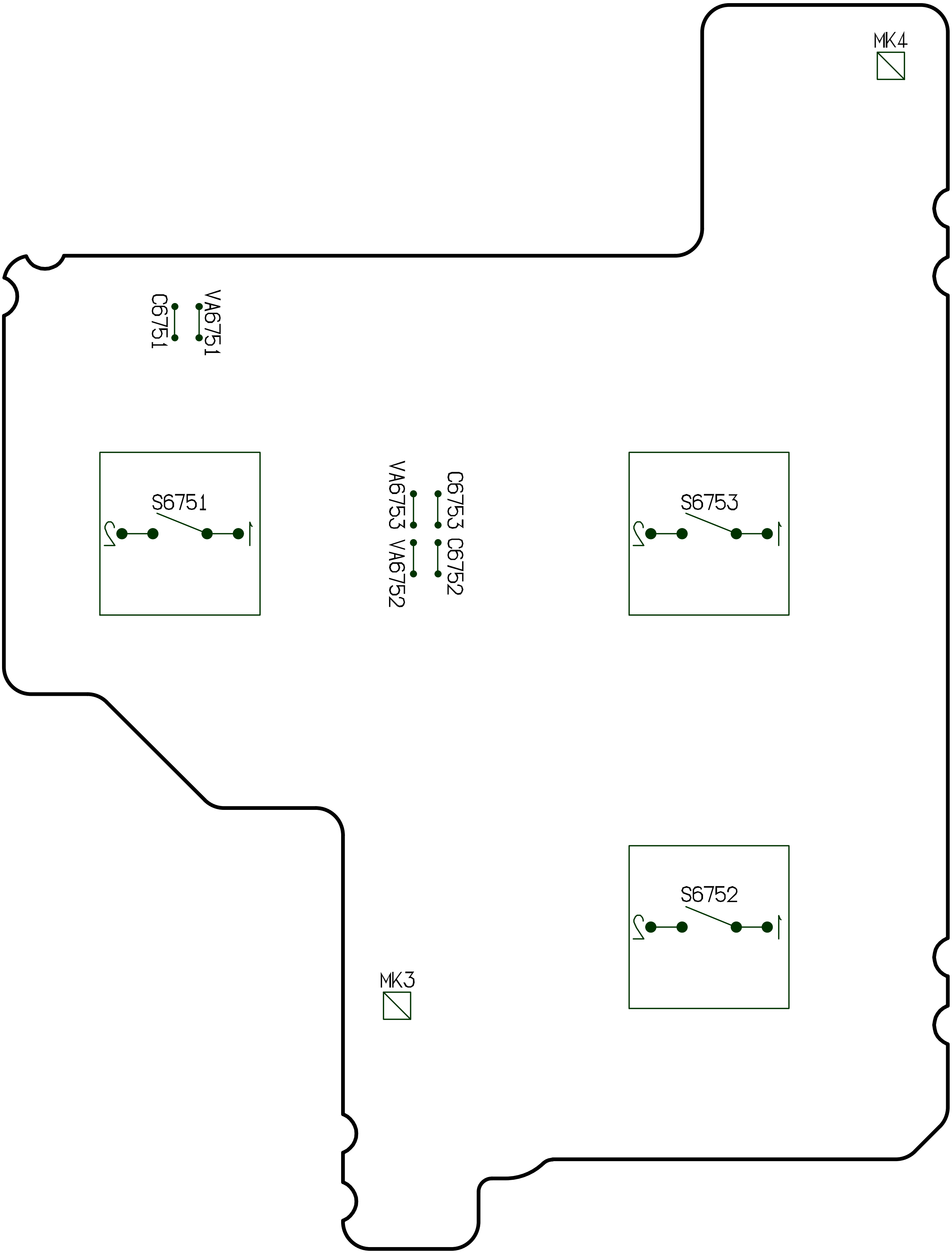
EYE_SENSOR P.C.BOARD



SUB_SS_ZOOM P.C.BOARD (FOIL SIDE)



SUB_SS_ZOOM P.C.BOARD (COMPONENT SIDE)



SECTION 6

EXPLODED VIEWS & REPLACEMENT PARTS LIST

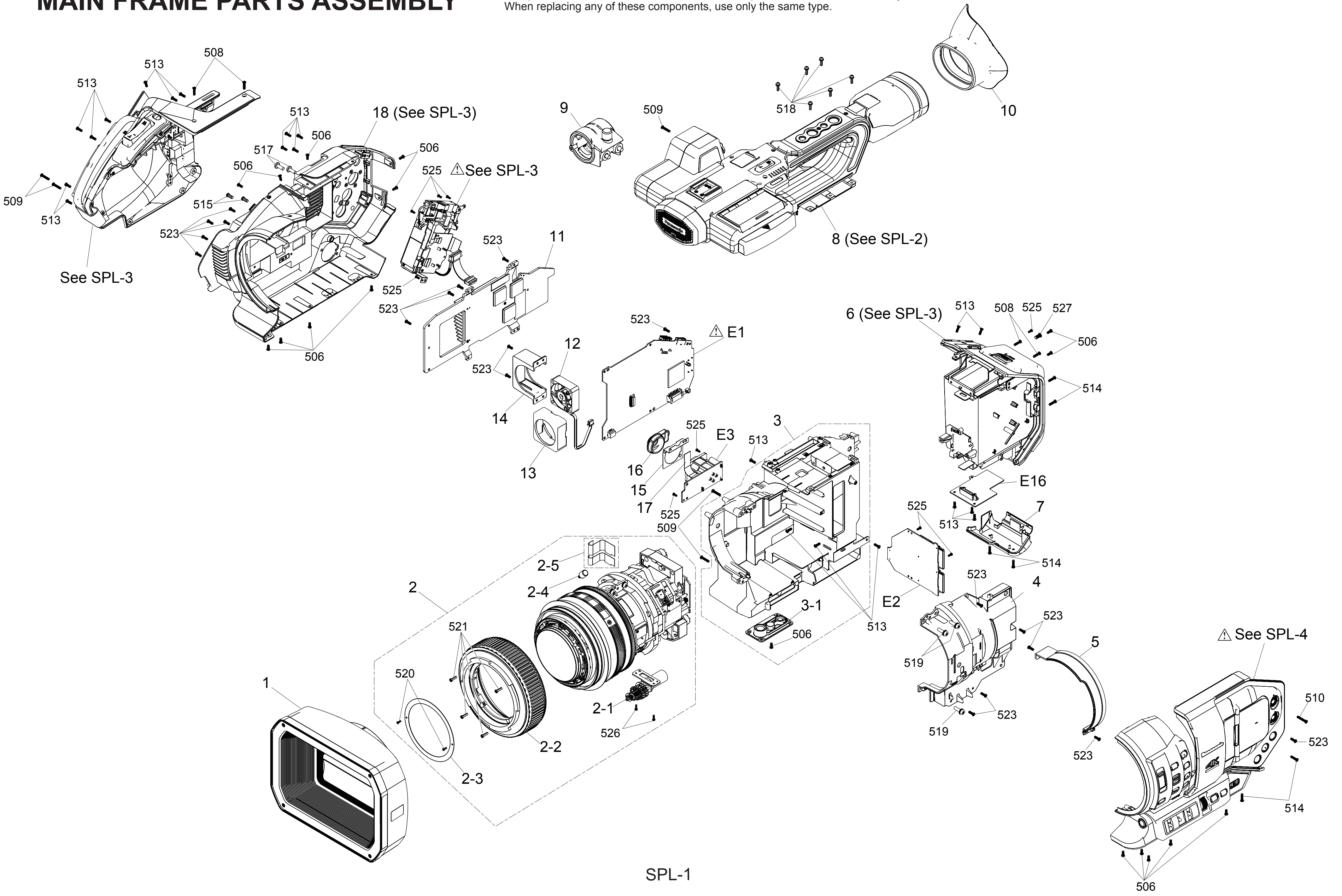
Model No. : **AG-DVX200/PJ/PB/PX/EJ/EN/ED/AN/MC**

Note:

1. ∗Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS (μF) P=μμF.
3. The P.C.Board unit marked with "■" shown below the main assembled parts.
4. The parts marked with Ⓔ on the exploded view show the electric parts.
5. INPORTANT SAFETY NOTICE
   Components identified with the mark ⚠ have the special characteristics for safety When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
   After the discontinuation of this assembly in production, it will no longer be available.
7. "M"in Remark column indicates needed in the periodical maintenance.

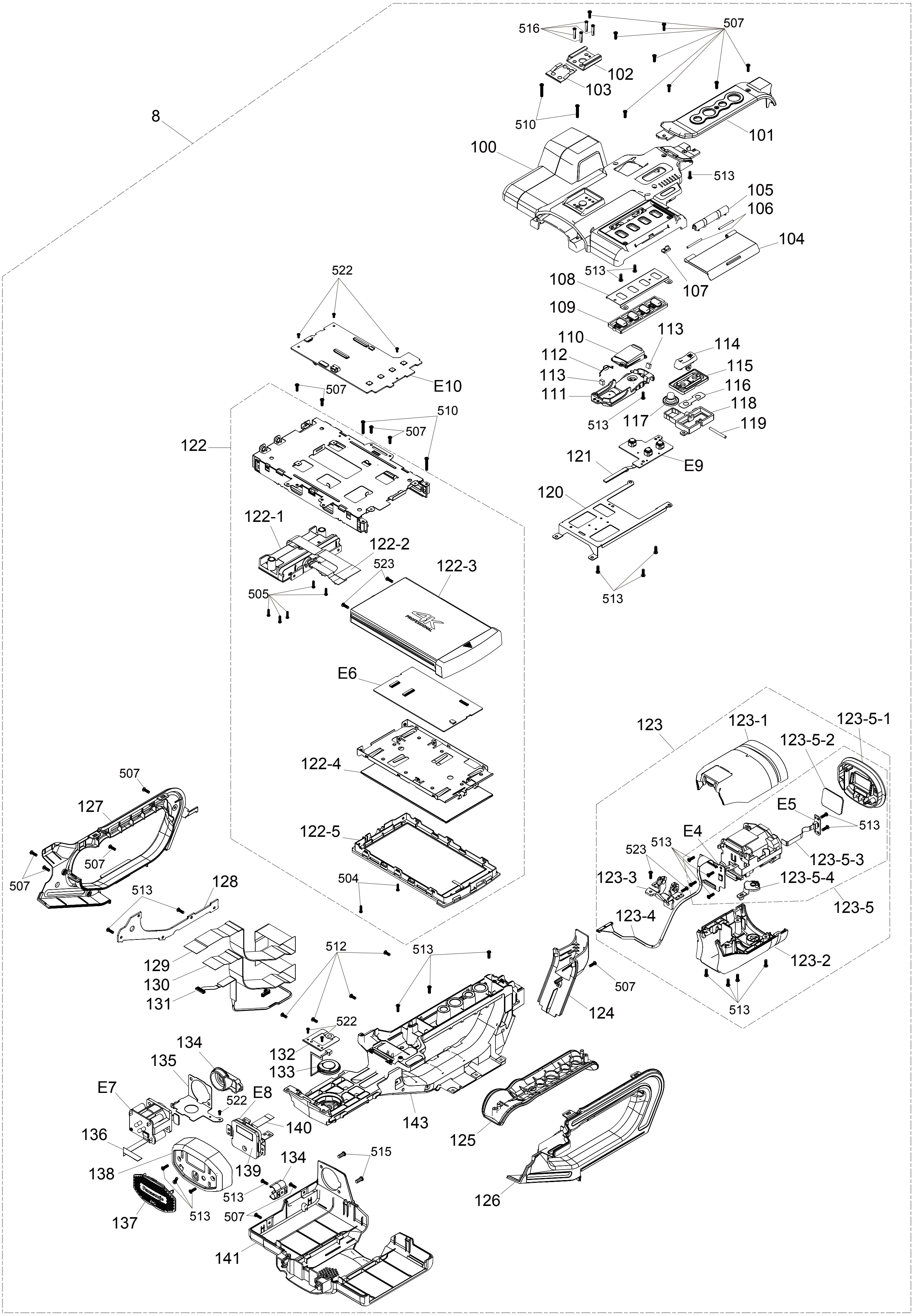
MAIN FRAME PARTS ASSEMBLY

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.



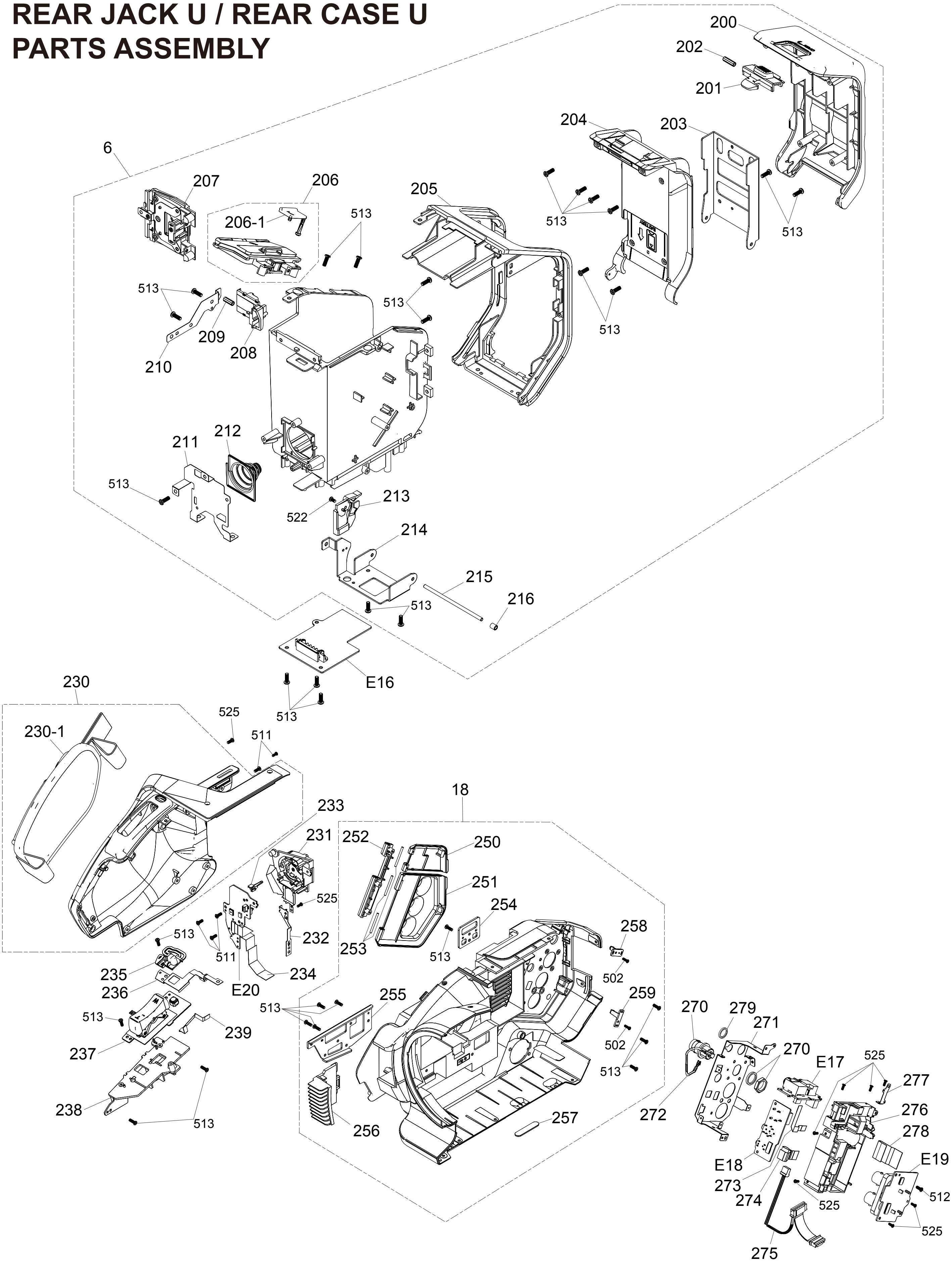
HANDLE ASSY PARTS ASSEMBLY

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.



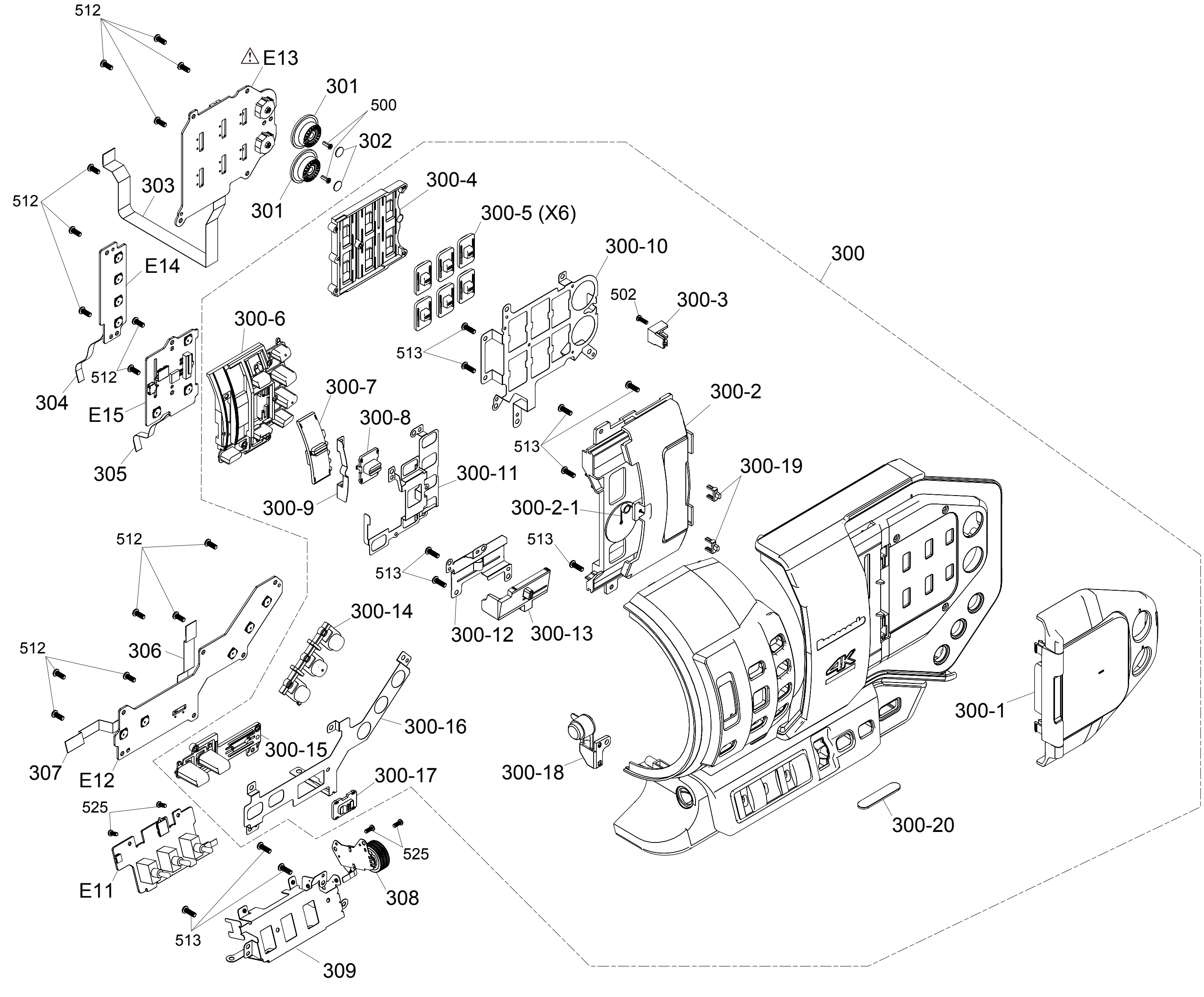
GRIP U / SIDE CASE L U / REAR JACK U / REAR CASE U PARTS ASSEMBLY

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.



SIDE CASE R PARTS ASSEMBLY

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.



MAIN FRAME

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	SYK1069	LENS HOOD U	1	
2	SXW0230	LENS U(Z213)	1	
2-1	L6DBYYYC0001	ZOOM MOTOR U	1	
2-2	SXQ0468	MF RING U	1	
2-3	SGH0019K	LENS NAME PLATE	1	
2-4	VHD2537	ZOOM RING TAB	1	
2-5	STQ0001Z	MOS FPC	1	
3	SYK1112	MAIN FRAME U	1	
3-1	VGQ1A16	TRIPOD PIECE	1	
4	SGF0059	LENS FRAME-R	1	
5	SGK0235S	RING ORNAMENT	1	
6	SYK1054	REAR CASE (1) U	1	
7	SKK0302K	REAR PAD	1	
8	SYK1080	HANDLE U	1	
9	SYA0021	MIC HOLDER U	1	
10	SMG0069	EYE CUP	1	
11	SYK1071	MAIN RADI PLATE U	1	
12	L6FAYYYD0036	FAN	1	
13	VMG2128	FAN_DAMPER	1	
14	SGQ0561	FAN CASE	1	
15	SMA0217	XLR REAR PLATE	1	
16	VJF1468	XLR CAP	1	
17	STJ0130	XLR_REAR_FFC	1	
18	SYK1090	SIDE CASE L U	1	

HANDLE ASSY

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
100	SKK0299K	HANDLE CASE T	1	
101	SGK0230K	HA CARBON FRAME T	1	
102	VMP2407	ACCESSORY SHOE	1	
103	VMC2236	ACCESSORY SHOE SPRING	1	
104	SKF0094K	TOP OP DOOR	1	
105	VGQ1Q96	DOOR SHAFT STOPER	1	
106	SMS0114	DOOR SHAFT(BLACK)	2	
107	SGL0025	BACK TALLY PANEL LIGHT	1	
108	SMA0050	TOP OP EARTH PLATE	1	
109	SGU0038	TOP OP BUTTON	1	
110	SKF0093K	SUB SS COVER	1	
111	SGQ0576	SUB SS PIECE	1	
112	SMB0139	SUB SS COVER SPRING	1	
113	SGQ0588	SUB SS CUSHION	2	
114	VGU9208	HANDLE T/W BOTTON	1	
115	VMG2116	HANDLE T/W BOTTON RUBBER	1	
116	SGQ0338	SUB ZOOM SHEET	1	
117	VGU9988	REC BUTTON	1	
118	SGQ0156	SUB ZOOM CASE	1	
119	VMS8226	SUB ZOOM SHAFT	1	
120	SGG0017	HA TOP BRACKET	1	
121	STJ0128	SUB_SS_ZOOM_FFC	1	
122	SYK1083	LCD SLIDE U	1	
122-1	SYK1085	LCD HINGE U	1	
122-2	STJ0133	MONITOR FPC	1	
122-3	SKK0291K	LCD CASE T	1	
122-4	L5EDDYY00552	LCD PANEL	1	
122-5	SYK1086	LCD CASE B U	1	
123	SYK1079	EVF U	1	
123-1	SKK0297K	EVF CASE T	1	
123-2	SKK0298K	EVF CASE B	1	
123-3	VXD0623	EVF HINGE U	1	
123-4	STK0014A	EVF SLIM WIRE	1	
123-5	SYQ0456	EVF (1) U	1	
123-5-1	SYQ0548	EVF PIECE U	1	
123-5-2	VKW3527	EVF PANEL	1	
123-5-3	STJ0134	EYE_SENSOR_FFC	1	
123-5-4	SML0057	EVF ADJUST LEVER	1	
124	SGK0231K	HA CARBON FRAME B	1	
125	SGQ0567	HA GRIP PIECE	1	
126	SKK0296K	HADLE CASE R	1	
127	SKK0295K	HADLE CASE L	1	
128	SMA0218	HANDLE PLATE	1	
129	STJ0116	HANDLE_OP_B_FFC	1	
130	STJ0115	HANDLE_OP_A_FFC	1	
131	STK0015A	MONITOR SLIM WIRE	1	
132	SMA0222	SPEAKER BRACKET	1	
133	L0AA02A00127	SPEAKER UNIT	1	
134	VJF1468	XLR CAP	1	
135	SMA0221	XLR BRACKET F	1	
136	STJ0129	XLR_FRONT_FFC	1	
137	SYK1063	MIC COVER U	1	
138	SKK0289K	MIC CASE	1	
139	SYQ0459	MIC HOLDER U	1	
140	STJ0120	A_WIRED_FFC	1	
141	SYK1082	HANDLE CASE B U	1	
142	VJF1256	CABLE CLAMPER	1	
143	SGF0060	HANDLE FRAME	1	

GRIP/SIDE CASE L/REAR CASE/REAR JACK

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
200	SKF0097K	BATTERY DOOR	1	
201	SGU0239	BATTERY DOOR LEVER	1	
202	SMB0158	BATT DOOR LOCK SPRING	1	
203	SGG0018	BATTERY DOOR PLATE	1	
204	SGQ0583	BATTERY DOOR BACK	1	
205	SGK0234K	REAR COVER	1	
206	SYK1066	USB DOOR U	1	
206-1	SKF0105K	USB INNER COVER	1	
207	SYK1056	HDMI COVER U	1	
208	SML0059	BATTERY LOCK LEVER	1	
209	SMB0078	BATTERY LOCK SPRING	1	
210	SMA0231	BATTERY LEVER PLATE	1	
211	SMA0229	BATTERY EARTH PLATE	1	
212	SMB0141	BATTERY SPRING	1	
213	SGQ0678	FRICTION PIECE	1	
214	SMA0230	DOOR STOPPER PLATE	1	
215	SMS0188	DOOR SHAFT	2	
216	SMB0160	BATT DOOR EARTH SPRING	1	
230	SYK1067	GRIP 1 U	1	
230-1	SYQ0419	GRIP BELT U	1	
231	SYQ0462	POWER SS (1) U	1	
232	SMA0211	POWER SS EARTH PLATE	1	
233	SGL0026	PW PANEL LIGHT	1	
234	STJ0117	SS_GYRO_FFC	1	
235	SGU0231	REC CHECK BUTTON	1	
236	SMA0210	PHOTO EARTH PLATE	1	
237	SYQ0549	ZOOM LEVER SERVICE U	1	
237-1	D2Z1Z15Y0001	ZOOM VR	1	
238	SGQ0550	ZOOM BASE	1	
239	STJ0040	G ZOOM/CAM OP FFC	1	
250	SKF0091K	DC DOOR	1	
251	SKF0090K	BNC DOOR	1	
252	SGQ0556	BNC DOOR PIECE	1	
253	VMS8411	DOOR SHAFT A	3	
254	SMA0070	SHOULDER BELT BRACKET	1	
255	SMA0213	BELT BRACKET F	1	
256	SGQ0547	FIN PIECE	1	
257	SKA0012K	SET LEG CUSHION	1	
258	SGQ0557	DC DOOR LOCK PIECE	1	
259	SGQ0246	DOOR LOCK PIECE	1	
270	K1SYYYYA0002	BNC CONNECTOR	1	
271	SMA0215	JACK PLATE	1	
272	K1TYYYY00251	BNC WIRE	1	
273	STJ0119	HP_FFC	1	
274	STJ0120	A_WIRED_FFC	1	
275	SEE0163	DC BATT WIRE	1	
276	SGQ0560	JACK PIECE	1	
277	SMA0248	DC GND PLATE	1	
278	STJ0118	BNC_FFC	1	
279	VHN0382	M6 NUT	1	

SIDE CASE R

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300	SYK1057	SIDE CASE R (1) U	1	
300-1	SYK1061	AUDIO COVER U	1	
300-2	SYK1060	SD DOOR U	1	
300-2-1	SMB0140	SD DOOR SPRING	1	
300-3	SGQ0674	R HOOK	1	
300-4	SGQ0581	AUDIO LEVER BASE	1	
300-5	SGU0040	AUDIO LEVER	6	
300-6	SGU0233	OP USER BUTTON	1	
300-7	SGU0232	ND LEVER	1	
300-8	SGU0234	FOCUS LEVER	1	
300-9	SMC0060	ND SPRING	1	
300-10	SMA0228	AUDIO EARTH PLATE	1	
300-11	SMA0232	FRONT EARTH PLATE	1	
300-12	SMC0059	SERVO SPRING	1	
300-13	SML0058	SERVO LEVER	1	
300-14	SGU0238	REAR OP BUTTON	1	
300-15	SGU0236	MENU BUTTON	1	
300-16	SMA0233	BOTT REAR PLATE	1	
300-17	SGU0237	AUTO MANU LEVER	1	
300-18	SGU0235	AWB BUTTON	1	
300-19	SGL0007	ACCESS PANEL LIGHT	2	
300-20	SKA0012K	SET LEG CUSHION	1	
301	VGU0K96	AUDIO VR KNOB	2	
302	VGQ1A44	AUDIO VR SHEET	2	
303	STJ0121	AUDIO_OP_FFC	1	
304	STJ0125	USER_OP_FFC	1	
305	STJ0040	G ZOOM/CAM OP FFC	1	
306	STJ0122	SEL_OP_FFC	1	
307	STJ0123	SUB_OP_FFC	1	
309	K0RE00300036	JOG DIAL	1	
310	SMA0234	BOTT FRONT PLATE	1	

SCREW PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
500	XQN14+B4FN	SCREW	2	
501	XQN16+BJ4FN	SCREW	2	
502	XQN16+BJ5FN	SCREW	7	
503	XQN16+BJ6FJK	SCREW	2	
504	XQN16+BJ6FN	SCREW	4	
505	XQN16+BJ8FN	SCREW	5	
506	XQN2+B5FJK	SCREW	17	
507	XQN2+B6FJK	SCREW	21	
508	XQN2+B8FJK	SCREW	4	
509	XQN2+BJ10FJK	SCREW	5	
510	XQN2+BJ12FJK	SCREW	5	
511	XQN2+BJ5FJK	SCREW	7	
512	XQN2+BJ5FN	SCREW	20	
513	XQN2+BJ6FJK	SCREW	97	
514	XQN2+BJ8FJK	SCREW	6	
515	XQN26+B6FJK	SCREW	4	
516	XQS2+A10FJK	SCREW	4	
517	XTB3+8GFJK	SCREW	2	
518	XYN2+J8FJ	SCREW	8	
519	XYN3+J10FJ	SCREW	3	
520	VHD1972	SCREW	2	
521	VHD1976	SCREW	4	
522	VHD1919	SCREW	8	
523	VHD2578	SCREW	21	
524	VHD2189	SCREW	3	
525	VHD1907	SCREW	25	
526	VHD1974	SCREW	2	
527	SHD0036	SCREW	1	

PACKING PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	DE-A88AA/S	CHARGER	1	AG-DVX200
⚠	DE-A88DE/S	CHARGER	1	AG-DVX200ED/EJ/EN/PB/AN
⚠	DE-A88CC/S	CHARGER	1	AG-DVX200MC
⚠	DE-A88BE/S	CHARGER	1	AG-DVX200PJ/PX
⚠	K2CA2YY00247	AC CABLE	1	AG-DVX200
⚠	K2CR2YY00026	AC CABLE	1	AG-DVX200AN
⚠	K2CP2YY00083	AC CABLE	1	AG-DVX200ED
⚠	K2CQ2YY00117	AC CABLE	1	AG-DVX200EJ/EN
⚠	K2CT2YY00095	AC CABLE	1	AG-DVX200EJ/EN
⚠	K2CA2YY00130	AC CABLE	1	AG-DVX200MC
⚠	K2CR2YY00047	AC CABLE	1	AG-DVX200PB
⚠	K2CA2CA00025	AC CABLE	1	AG-DVX200PJ
⚠	K2CA2YY00129	AC CABLE	1	AG-DVX200PX
⚠	SAE0011AA	AC ADAPTOR	1	
	VFC4897	SHOULDER BELT	1	
	VYC1144	SCREW U	1	
	SPG0517	PACKING CASE (IN)		AG-DVX200MC
	SPG0518	PACKING CASE (IN)		AG-DVX200/PJ/EJ/ED/PB/PX/AN/EN
	SPG0519	PACKING CASE (OUT)		AG-DVX200PJ/EJ
	SPG0520	PACKING CASE (OUT)		AG-DVX200MC
	SPN0367	CUSHION (TOP)		
	SPN0368	CUSHION (BOTTOM)		

ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
E1	SEP0468AA	MAIN PCB	1	
E2	SEP0471AA	SD_HOLDER_PCB	1	
E3	SEP0477AA	XLR_REAR_PCB	1	
E4	SEP0469AA	EVF_PCB	1	
E5	SEP0489AA	EYE SENSOR PCBU	1	
E6	SEP0470AA	MONITOR_PCB	1	
E7	SEP0478AA	XLR_FRONT_PCB	1	
E8	SEP0491AA	MEMS_MIC_PCB	1	
E9	SEP0490AA	SUB SS ZOOM PCBU	1	
E10	SEP0479AA	HANDLE_OP_PCB	1	
E11	SEP0485AA	TOGGLE OP_PCB	1	
E12	SEP0483AA	MENU OP_PCB	1	
E13	SEP0484AA	AUDIO_OP_PCB	1	
E14	SEP0492AA	USER_OP_PCB	1	
E15	SEP0482AA	CAM OP_PCB	1	
E16	SEP0480AA	BATT_CATCHER_PCB	1	
E17	SEP0476AA	DC_JACK_PCB	1	
E18	SEP0474AA	A_WIRED_PCB	1	
E19	SEP0475AA	BNC_PCB	1	
E20	SEP0487AA	SS_GYRO_PCB	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	SEP0468AA	MAIN PCB		
⚠ IP1501	K5H802YA0089	IC PROTECTOR	1	
⚠ IP6851	ERBRD5R00X	IC PROTECTOR	1	
⚠ R1203	D1JBR179A023	FUSE	1	
⚠ R1601	D1JB2R70A023	FUSE	1	
⚠ R1671	D1JBR179A023	FUSE	1	
⚠ R1681	D1JBR179A023	FUSE	1	
⚠ R6003	D1JBR032A055	FUSE	1	
■ E13	SEP0484AA	AUDIO_OP_PCB		
⚠ B6951	ML-614S/ZTK	BATTERY	1	
■ E17	SEP0476AA	DC_JACK_PCB		
⚠ IP6851	ERBRD5R00X	IC PROTECTOR	1	